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Annotated checklist of fish and lamprey species (Gnathostomata and Petromyzontomorphi) of Turkey, including a Red List of threatened and declining species

Ronald Fricke, Murat Bilecenoglu & Hasan Musa Sari

Abstract

An annotated checklist of fish and lamprey species of Turkey comprises a total of 694 species in 155 families (including 45 species which are not native). 248 species (plus 13 introduced) occur in fresh water; the largest freshwater fish families are the Cyprinidae, Balitoridae and Cobitidae. 279 species (plus eight introduced) live in transitional waters. In marine habitats, 434 species (plus 46 immigrated or introduced) are found, with the Gobiidae and Sparidae being the largest families. While there is no marine endemic faunal element in Turkey, and only three species endemic to transitional waters, the freshwater fish fauna comprises a total of 78 endemic species (31.5 % of the total native species). 23 endemic fish species are found in the central lakes (including seven in Beyşehir Gölü, six in Eğirdir Gölü), 12 each in Anatolian Aegean Sea watersheds (most in Büyük Menderes River) and in Anatolian Black sea watersheds, 11 in the upper reaches of the Persian/Arabian Gulf watersheds, nine in the Anatolian Mediterranean Sea watersheds, eight in western Anatolian lake watersheds, and seven in the Asi Nehri/Orontes.

Apterichtus caecus (Linnaeus, 1758), *Chromogobius zebratus* (Kolombatović, 1891), *Gobius fallax* Sarato, 1889, *Nemacheilus insignis* (Heckel, 1843), *Opeatogenys gracilis* (Canestrini, 1864) and *Pomatoschistus quagga* (Heckel, 1837) are recorded from Turkish waters for the first time.

Due to rapid economic and agricultural development and population growth during the past decades, the native Turkish fish fauna is now highly threatened and needs urgent political action to ensure its conservation. The marine fish species are threatened by eutrophication/pollution out of inflowing rivers and coastal towns, by marine aquaculture (due to pollution, eutrophication and escaping fish), fisheries, and construction along the shore (especially hotels, expansion of coastal cities and construction of coastal roads). In freshwater habitats, most rivers, streams and lakes are heavily polluted and/or eutrophicated; saprobia indices of 4 or 5 are frequently observed. Additional threats include construction of dams and weirs, water abstraction (many rivers and lakes were found dry), gravel extraction, introduction of foreign species, and aquaculture.

Out of a total of 694 Turkish fish and lamprey species, 397 species are on the Red List, with two species globally extinct, 10 regionally extinct, 65 critically endangered, 117 endangered,

136 vulnerable, 34 near threatened, and 33 threatened migrants. An additional 203 species is data deficient; 46 species are not native. Only the remaining 48 species are considered as not threatened. In addition to the Red List, a list of taxa proposed for the Annexes II, IV and/or V of the EU Habitats Directive is presented. A set of measures for the conservation of the Turkish fish fauna is proposed.
Keywords: Checklist, Red List, threatened and declining species, Pisces, Gnathostomata, Petromyzontomorphi, marine, freshwater, transitional waters, new records, Turkey, IUCN criteria, EU Habitats Directive, EU Water Framework Directive.

Zusammenfassung

Die Checkliste der Fische und Neunaugen der Türkei enthält 694 Arten in 155 Familien (einschließlich 45 nicht einheimischen Arten). 248 Arten (sowie 13 eingeführte) leben im Süßwasser; die artenreichsten Süßwasserfischfamilien sind die Cyprinidae, Balitoridae und Cobitidae. 279 Arten (sowie acht eingeführte) leben in Übergangsgewässern (Brackwasser). Im Meer werden 434 Arten (sowie 46 eingewanderte oder eingeführte) gefunden, mit den Gobiidae und Sparidae als artenreichste Familien. Während keine endemischen marinen Arten und nur 3 endemische Arten in Übergangsgewässern in der Türkei bekannt sind, gibt es 78 endemische Süßwasserfischarten (31.5 % der gesamten einheimischen Süßwasserfischfauna). 23 endemische Arten sind aus dem Gebiet der zentralen Seen bekannt (darunter sieben endemische Arten im Beyşehir-See, sechs im Egirdir-See), jeweils 12 in den anatolischen Ägäis-Wassersystemen (die meisten im Büyük Menderes) und im anatolischen Schwarzmeereinzugsgebiet, 11 in den Oberläufen der Einzugsgebiete des Persisch-Arabischen Golfes, neun in den anatolischen Mittelmeereinzugsgebieten, acht in den westlichen anatolischen Seen, und sieben im Asi Nehri/Orontes-Gebiet.

Apterichtus caecus (Linnaeus, 1758), *Chromogobius zebratus* (Kolombatović, 1891), *Gobius fallax* Sarato, 1889, *Nemacheilus insignis* (Heckel, 1843), *Opeatogenys gracilis* (Canestrini, 1864) und *Pomatoschistus quagga* (Heckel, 1837) wurden zum ersten Mal in türkischen Gewässern gefunden.

Durch die schnelle ökonomische und landwirtschaftliche Entwicklung und das starke Bevölkerungswachstum in der Türkei während der letzten Jahrzehnte wurde die türkische Fischfauna stark gefährdet und benötigt nun dringend politische Maßnahmen, um sie zu erhalten. Die marine Fischfauna ist durch Verschmutzung und Eutrophierung aus einfließenden Flüssen und von Küstenstädten gefährdet, sowie durch marine Aquakultur (Verschmutzung, Eutrophierung und entwichenes Fischmaterial), Fischerei, und Baumaßnahmen entlang der Küste (Hotels und Erweiterung der Küstenstädte sowie Bau von Küstenstraßen). Auch im Süßwasser sind die meisten Flüsse und Seen stark eutrophiert und verschmutzt; nicht selten wird ein Saprobienindex von 4 oder 5 beobachtet. Weitere Gefährdungsursachen bestehen im Bau von Wehren und Staudämmen, in Wasserentnahme (viele Flüsse und Seen wurden ausgetrocknet vorgefunden), Kiesentnahme, Einführen gebietsfremder Arten und Aquakultur.

Von 694 türkischen Fisch- und Neunaugenarten stehen 397 auf der Roten Liste, mit zwei weltweit ausgestorbenen Arten, 10 regional ausgestorbenen Arten, 65 vom Aussterben bedrohten, 117 stark gefährdeten, 136 gefährdeten, 34 potenziell gefährdeten Arten und 33 gefährdeten Wanderfischen. Bei weiteren 203 Arten ist die Datenlage unklar; 46 Arten sind nicht einheimisch. Nur die übrigen 48 Arten werden derzeit als nicht gefährdet betrachtet. Zusätzlich zur Roten Liste wird eine Liste von Taxa zur Erweiterung der Annexe II, IV und V der EU-FFH-Richtlinie vorgeschlagen. Ebenso werden allgemeine Empfehlungen zum Schutz der türkischen Fischfauna gegeben.

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1 Introduction

Turkey is situated between Europe and Asia. Its fish fauna is highly diverse, comprising four major marine regions and 14 major freshwater fish regions, mainly distinguished by different watershed systems (Tab. 1, Fig. 1). The marine fish fauna is mainly of eastern Atlantic Ocean/Mediterranean Sea origin, with some additional Black Sea endemics. The main freshwater faunal elements include European and Anatolian Black Sea watersheds, European and Anatolian Mediterranean Sea watersheds including the Aegean Sea, Caspian Sea watersheds (Kura and Aras rivers), Persian/Arabian Gulf watersheds (Euphrates and Tigris rivers), and several lake watersheds grouped in western, central and eastern Anatolian lakes, Lake Urmia, Van Gölü, and Quwayq watersheds. Each of the freshwater systems is inhabited by endemic fish species.

The ichthyofauna of Turkey has only relatively recently been discovered. Freshwater fishes were poorly known until 1843, when Heckel (1843) revised the fishes of the Middle East, including Asi Nehri/Orontes, Quwayq, Firat Nehri/Euphrates and Dicle Nehri/Tigris systems. Many fish species described in that paper are still valid today.

One of the most important researchers on the fishes of Turkey was Curt Kosswig, who was born in Berlin on 30 October 1903. Kosswig studied philosophy and natural sciences at Berlin University, and finished his Ph.D. in 1927. From 1937–1955, he was Professor of Zoology at the University of İstanbul, and specialised in limnology, studying freshwater habitats all over Turkey. He accepted in 1955 a position as Professor of Zoology in Hamburg, but returned to Turkey when he retired, and died on 29 March 1982 in Erzurum/Turkey (Fricke 1993: 419–425).

Tab. 1. Regions covered by the checklist and Red List of Turkish fishes and lampreys in geographical order; first seas, then inland waters, listed from northwest to southeast.

Abbreviation	Region	Marine/transitional/ freshwater
BS	Black Sea	Marine
AS	Aegean Sea	Marine
MA	Sea of Marmara	Marine
MS	Mediterranean Sea	Marine
EB	European Black Sea watersheds	Transitional/freshwater
EM	European Mediterranean Sea watersheds	Transitional/freshwater
AD	Aegean Sea watersheds	Transitional/freshwater
MD	Anatolian Mediterranean Sea watersheds	Transitional/freshwater
WL	Western Anatolian lake watersheds	Freshwater
CL	Central Anatolian lake watersheds	Freshwater
EL	Eastern Anatolian lake watersheds	Freshwater
BD	Anatolian Black Sea watersheds	Transitional/freshwater
CD	Caspian Sea watersheds	Freshwater
OD	Asi Nehri/Orontes watershed	Transitional/freshwater
QD	Quwayq River watershed	Freshwater
GD	Gulf watersheds (Firat Nehri, Dicle Nehri)	Freshwater
VD	Van Gölü watershed	Freshwater
UD	Lake Urmia watershed	Freshwater

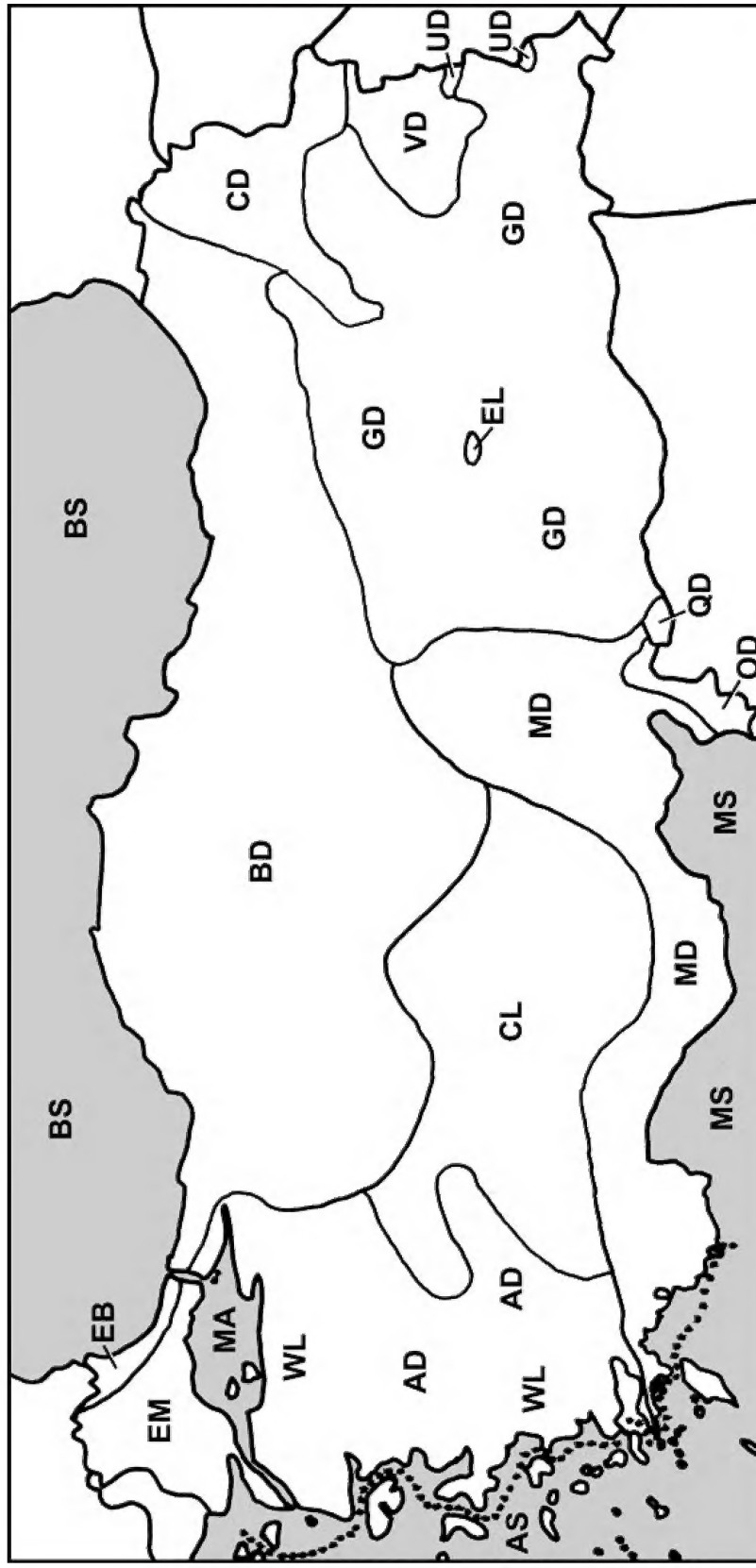

Fig. 1. Turkish regions covered by the checklist and Red List of Turkish fishes and lampreys. – Abbreviations see Tab. 1.

From 1937–1955, Kosswig and his team of İstanbul University collected fish material throughout Turkey; they described several new species, and acquired an important collection which is now deposited at Zoologisches Institut und Zoologisches Museum der Universität Hamburg, Germany (ZIH). This collection forms the basis for the important series 'Süßwasserfische der Türkei', which is the first revision of the Turkish freshwater fish fauna (Ladiges 1960, 1964, 1966; Banarescu & Nalbant 1964; Lueken 1967; Behnke 1968; Karaman 1969, 1971, 1972; Sasse 1974; Banarescu et al. 1978). The fish material in other important Turkish fish collections was used for the present project, especially Adnan Menderes Üniversitesi Zooloji Müzesi, Turkey (ZMADU, marine species), Ege Üniversitesi Su Ürünleri Fakültesi Müzesi, Turkey (ESFM, inland water fishes), and Staatliches Museum für Naturkunde Stuttgart, Germany (SMNS).

Coad (1991) compiled a critical checklist of the fishes of the Tigris-Euphrates system, including Turkish species. A checklist of Turkish freshwater fishes was recently published by Kuru (2004); the marine species were treated by Bilecenoglu et al. (2002). After the marine checklist was published in 2002, the following species were recorded from Turkish seas in the literature: *Torquigener flavimaculosus* (by Bilecenoglu 2003); *Diaphus rafinesquii* and *Lobianchia gemellarii* (by Cihangir et al. 2003); *Heniochus intermedius* (by Gökoglu et al. 2003); *Bregmaceros atlanticus* (by Yilmaz et al. 2004); *Hippocampus fuscus* and *Syngnathus rostellatus* (by Gökoglu et al. 2004); *Lagocephalus sceleratus* (by Akyol et al. 2005); *Glossanodon leioglossus* (by Bilecenoglu et al. 2005); *Platax teira* (by Bilecenoglu & Kaya 2006); *Nemichthys scolopaceus* and *Benthocometes robustus* (by Bilecenoglu in press); *Parupeneus forsskali* (by Çinar et al. 2006). In addition, several range extensions were published: *Lepidotrigla dieuzeidei* (by Eryilmaz 2002a; northern Aegean Sea); *Neogobius melanostomus* (by Eryilmaz 2002b; northern Aegean Sea); *Sphoeroides pachygaster* (by Eryilmaz et al. 2003); *Sillago sihama* (by Bilecenoglu 2004; southern Aegean Sea); *Alopias superciliosus* (by Mater 2005; southern Aegean Sea); *Squatina aculeata* (by Filiz et al. 2005; southern Aegean Sea).

The present paper is intended to provide an actual list of all fish species occurring in Turkey, their distribution, threat and decline status to form a basis for future conservation in the context of Turkish national legislation, the EU Habitats Directive and the EU Water Framework Directive.

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2 Methods and Materials

All species known naturally to occur in Turkey are listed here. Introduced species which are not autochthonous to Turkey are also listed following Çinar et al. (2005), but are not con-

Tab. 2. Main threats for threatened and declining species of lampreys and fishes in the HELCOM area, ordered by importance of the criteria.

Threat abbreviation	Description	Definition
FIT	Fishery (target species)	A species that is commercially exploited as a target species.
FIB	Fishery (bycatch)	A species that is not regularly commercially exploited, but frequently caught as bycatch in fisheries.
HAB	Habitat loss	A species that is threatened by a loss of its habitat (silted sand bottoms due to eutrophication, disappearing seagrass beds, etc.).
EUT	Eutrophication/ pollution	A species that is threatened by effects of eutrophication (nutrient-rich water, oxygen deficiency, etc.), or various effects of organic or inorganic pollution, such as oil spills, various chemicals, hormones etc.
CON	Construction/weirs/ dams in rivers	A migratory species that is threatened inland by construction measures in rivers, e. g. weirs, dams, barrages.
AQU	Aquaculture/ introduction/ Lessepsian immigration	A species that is threatened by aquaculture or introduction (change of genetics; competition by introduced species).
ABS	Water abstraction	A species that is threatened by water abstraction for irrigation projects and other human needs.
PRL	Prey loss	A species that is threatened by the loss of the main prey species.
PAR	Parasites	A species that is threatened by health problems due to parasites.
HOS	Loss of host species	A species that is threatened by the loss of the main host species.
LES	Lessepsian immigration	A species that is threatened by competition through species immigrated into the eastern Mediterranean via Suez Canal.

sidered as threatened. The previous checklists of Bilecenoglu et al. (2002) and Kuru (2004) are taken as a baseline; the taxonomy, however, was updated, and additional records were added. The taxonomic classification mainly follows Eschmeyer (2006); if not, the source of the classification is given as a remark. Most of the English names follow Froese & Pauly (2006). In addition, Turkish fish names are given as far as available, following Geldiay & Balik (1988), Anonymus (1990), Kuru (1996) and Can & Bilecenoglu (2005).

The checklist and Red List of Turkish fishes and lampreys covers the whole area of Turkey including the Exclusive Economic Zone (EEZ), excluding the waters of Northern Cyprus. All species known from Turkey are listed, including introduced and immigrated species. Species are grouped under their family names; families are presented in taxonomical order following Nelson (2006), species within a family in alphabetical order. An asterisk notes a species endemic to Turkey. Taxonomic comments are provided as appropriate, including commonly used synonyms. Subspecies are no longer recognised in the present paper; former subspecific taxa are either considered as valid species or synonymised, in order to fulfil the needs of conservation as subspecific names have previously caused much confusion. In the list, the distribution of each species within Turkey and outside the area is indicated. Regions are abbreviat-

Tab. 3. Definitions of localnesss (global and local importance) and guidance on selection criteria.

Criterion	Definition and Guidance
Global importance	Global importance of the Turkish population(s) for a species. Importance on a global scale, of Turkey, for the species is when a high proportion of a species at any time of the life cycle occurs in Turkey. – 'High proportion' is considered to be more than 75 % (of the world populations), when known.
Local importance	Importance within Turkey, of the regions for the species where a high proportion of the total population of a species within Turkey for any part of its life cycle is restricted to a small number of locations in Turkey. – 'High proportion' is considered to be 90 % of the population in a small number of locations of 50 km × 50 km grid squares. This is dependent on scientific judgement regarding natural abundance, range or extent and adequacy of recording. A different scale may be needed for different taxa.

Tab. 4. Definitions of rarity and sensitivity and guidance on selection criteria.

Rarity criterion	Definition and Guidance
Rare	A species is rare if the total population is small. In case of a species that is sessile or of restricted mobility at any time of its life cycle, a species is rare if it occurs in a limited number of locations in Turkey, and in relatively low numbers. In case of a highly mobile species, the total population size will determine rarity. – 'A limited number of locations' could be in a small number of 50 km × 50 km grid squares, but a different scale may be needed for different taxa. This is dependent on scientific judgement regarding natural abundance, range or extent and adequacy of recording.
Sensitivity criteria	**Definition and Guidance**
Very sensitive species	A 'very sensitive' species is one if very easily adversely affected by a human activity, and/or if affected is expected only to recover over a very long period, or not at all. – A 'very long period' may be considered to be more than 25 years. Sensitivity to human activities is measured by (a) life history characteristics; (b) dependence on other specific ecological attributes e. g. restricted/specific habitat requirements
Sensitive species	A 'sensitive' species is one if easily adversely affected by a human activity, and/or if affected is expected to recover in a long period. – A 'long period' may be considered to be in the range of 5 to 25 years. Sensitivity as above.

ed following Tab. 1 and shown in Fig. 1. If a species only occasionally occurs in an area as a migrant or has been introduced, this is indicated as well. It is also stated if a species occurs in fresh water, transitional water, and/or marine water, which is of special relevance for the application of the EU Water Framework Directive (Anonymus 2000b) under which fresh water and transitional water fish species must be monitored regularly.

Red list categories were used as published by IUCN (Anonymus 2001, 2003, 2005). The present red list is using the categories EX (extinct), EW (extinct in the wild; not relevant for this paper), RE (regionally extinct), CR (critically endangered), EN (endangered), VU (vulnerable), NT (near threatened), LC (least concern), DD (data deficient) and NE (not evaluated). For marine fishes with large distribution ranges, the additional category TM (threatened

Tab. 5. Guidance on decline as a selection criterion for species.

Criterion	Guidance
Extirpated (= Extinct)	A population of a species formerly occurring in aquatic habitats is defined as extirpated ● if it was still occurring in the area at any time during the last 100 years. ● and if there is a high probability, or it has been proved, that the last individuals have since died or moved away ● or if surveys in the area have repeatedly failed to record a living individual in its former range and/or known or expected habitats at appropriate times (taking into account diurnal, seasonal, annual patterns of behaviour) for at least 10 years.
Severe decline	A population of species occurring in aquatic habitats is defined as severely declined ● if individual numbers show an extremely high and rapid decline in the area over an appropriate time frame, or the species has already disappeared from the major part of its former range in the area ● or if individual numbers are at a severely low level due to a long continuous and distinct general decline in the past.
Significant decline	Means a considerable decline in number, extent or quality beyond the natural variability and in an appropriate frame for that species
Regional significant decline	Significant decline in two or more Turkish regions, but not in its whole distribution range within Turkey.
Probable decline	High probability of a significant decline in number, extent or quality in the future.

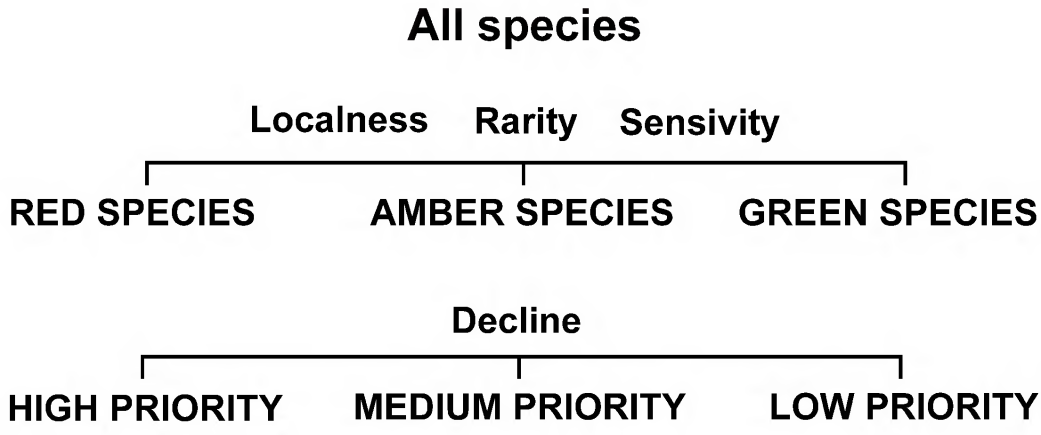

Fig. 2. Application scheme for 'Conservation Cube' approach for the selection of species. – Species are first grouped on localness (see Tab. 3), rarity and sensitivity (see Tab. 4) (considering keystone species) into red, amber and green lists (see Fig. 3); they are then grouped on decline into high, medium and low priorities (see Tab. 6) (Anonymus 2000a: 10, Appendix 5).

migrants) is used, which is defined as a species that would fall under the categories EN or CR but occurs in the area only as a straggler, and where the main threat may occur outside the area. Some threatened migrants have extremely wide distribution ranges and are stragglers throughout their ranges.

For prioritising species which need urgent action, the 'Conservation Cube' model used by OSPAR (Anonymus 2000a) and HELCOM (Fricke in press) is applied in the present paper.

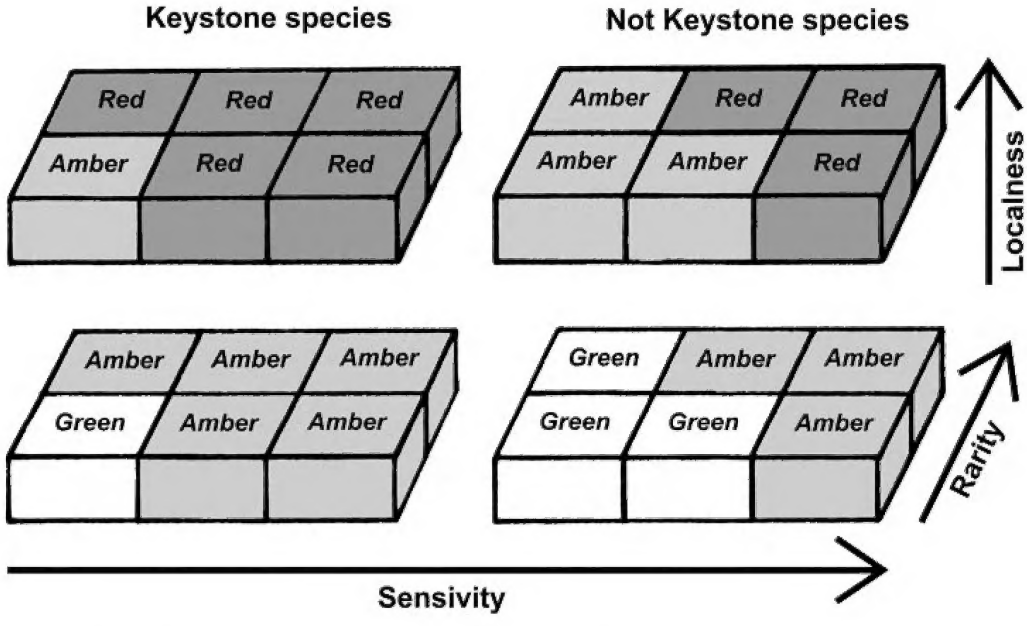

Fig. 3. Application of the 'Conservation Cube' approach for the selection of priority species. – Step 1. Grouping of species on localness, rarity and sensitivity (considering keystone species) into red, amber and green lists. Red is represented by dark grey shaded cubes, amber by light grey shaded cubes, green by white cubes (Anonymus 2000a: 10, Appendix 5).

Tab. 6. Application of the 'Conservation Cube' approach for the selection of priority species. – Step 2. Species grouped on decline into high (H), medium (M) and low (L) priorities (Anonymus 2000a: 10, Appendix 5).

	Stable population	Probable decline	Regional significant decline	Significant decline	Severe decline	Extinct	Not known
GREEN	L	M	L	L	H	H	L
AMBER	M	M	H	H	H	H	M
RED	H	H	H	H	H	H	H

Threats to the fish species are assessed; they fall into the categories listed and explained in Tab. 2.

The use of the terms 'global importance' and 'local importance' follows OSPAR (Anonymus 2000a) and HELCOM (Fricke in press); the terms are defined in Tab. 3. 'Rarity' and 'sensitivity' are defined in Tab. 4. A 'keystone species' is defined as a species which has a controlling influence on a community, following Anonymus (2000a: 10, Appendix 5).

An important selection criterion for species that is used to finally classify priorities is decline (Anonymus 2000a: 2, Appendix 1). Decline here means an observed or indicated significant decline in numbers, extent or quality (quality refers to life history parameters). The decline may be historic, recent or current. 'Significant' need not be in a statistical sense. Decline parameters are listed in Tab. 5.

The prioritisation procedure follows the scheme used by OSPAR and HELCOM (cited above). Beginning with a list of all species, the selection criteria 'localness', 'rarity' and 'sensitivity' are used together to establish whether a species should be considered to be on a 'red', 'amber' or 'green' list (Figs. 2–3, Tab. 6). Where a species is considered to be a 'keystone

species' then the probability of being red listed is increased. The criteria decline is then used as the final selector to establish whether a species is listed as a low, medium or high priority for conservation action. The criterion 'sensitivity to human impacts' is used to inform what conservation action may be appropriate (in effect 'ranking' species on the list). Finally, those species which are of 'global importance' are 'starred' in a similar fashion to habitats and species listed in the EU Habitats Directive. Testing the criteria will help to refine the priorities used in the decline table, resulting in low, medium or high priorities.

Out of the high priority species, a selection is proposed as candidate species for the Annexes II, IV and/or V of the EU Habitats Directive (Anonymus 1992).

Abbreviations

EU	European Union (http://europa.eu/)
FAO	Food and Agriculture Organisation of the United Nations (http://www.fao.org/)
HELCOM	Helsinki Commission (Baltic Sea Environment Protection Commission) (http://www.helcom.fi/)
IUCN	The World Conservation Union (http://www.iucn.org/)
OSPAR	OSPAR Commission for the Protection of the Marine Environment of the North-East Atlantic (http://www.ospar.org/)

Important Turkish geographical terms

Barajı	Barrage
Çayı	Stream
Gölü	Lake
Nehri	River

3 Annotated checklist and Red List of fish and lamprey species of Turkey

Petromyzontidae – Lampreys

Caspiomyzon wagneri (Kessler, 1870) – Caspian lamprey

Distribution. Kura-Aras River system. Fresh water, transitional and marine (Turkey: fresh water only). Turkey region: CD. Endemic to Caspian Sea and its tributaries.

Conservation. Extinct in Turkey (RE). Local importance. Threats: FIT, HAB, EUT, CON. Very sensitive to human activities. No keystone species. Significant decline. High priority for conservation action.

**Eudontomyzon lanceolata* (Kux & Steiner, 1972) – Turkish brook lamprey

Taxonomy. Recorded from Turkey by Kuru (2004: 9) under the name *Lampetra lanceolata*.

Distribution. Black Sea watersheds of Anatolia. Fresh water species. Turkey region: BD. Endemic to the area.

Conservation. Endangered in Turkey (EN). Global importance. Threats: HAB, EUT, CON. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive.

Eudontomyzon mariae (Berg, 1931) – Ukrainian brook lamprey

Taxonomy. Recorded from Turkey by Kuru (1980: 1) under the name *Lampetra mariae*.

Distribution. Black Sea and adjacent watersheds of Anatolia. Mainly observed in the vicinity of Trabzon (Kutrup 1996). Fresh water, transitional and marine water. Turkey regions: BS; EB, BD. Outside the area, Black Sea watersheds.

Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON. Sensitive to human activities. No keystone species. Low priority for conservation action.

Lampetra fluviatilis (Linnaeus, 1758) – European river lamprey; Bofa balığı

Distribution. Black Sea, Sea of Marmara, Aegean Sea and adjacent watersheds. Recorded

from rivers flowing to Sapanca Lake by ERGÜVEN (1989). Fresh water, transitional and marine water. Turkey regions: BS, MA, AS; EB, EM, AD, BD, WL. Outside the area, Mediterranean Sea and European Atlantic and adjacent watersheds.

Conservation. Extinct in Turkey (RE); last records are relatively old (1989), but if still present in Turkey, the species would be listed as critically endangered. Threats: FIT, HAB, EUT, CON. Sensitive to human activities. Keystone species. High priority for conservation action. In Appendix III of the Bern Convention (protected fauna). Listed on Annexes II and V of the EU Habitats Directive.

Petromyzon marinus Linnaeus, 1758 – Sea lamprey; Derebofa balığı

Taxonomy. This species was believed to be absent from the Black Sea (HARDISTY 1986: 103, fig. 14). However, early Russian authors mentioned a large migratory lamprey occurring in Don River. The record of *Petromyzon marinus* from the Black Sea is based on SMNS 13910 (1 specimen, Russia, Donec River, near Charkov, W. SCHMELZER, 1934). Though the species was historically distributed in the Black Sea region, it is now considered extinct in the area.

Distribution. Black Sea, Sea of Marmara, Aegean Sea, Mediterranean Sea and adjacent watersheds. Fresh water, transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, BD, MD. Outside the area, Mediterranean Sea, European Atlantic and Northwest Atlantic and adjacent watersheds.

Conservation. Extinct in Turkey (RE). Threats: FIT, HAB, EUT, CON. Very sensitive to human activities. No keystone species. High priority for conservation action. In Appendix III of the Bern Convention (protected fauna). Listed on Annex II of the EU Habitats Directive.

Chimaeridae – Ratfishes

Chimaera monstrosa Linnaeus, 1758 – Rabbit fish; Tavsan balığı

Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Norway to Morocco, Madeira and Azores.

Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. No keystone species. Probable decline. Medium priority for conservation action.

Odontaspididae – Sand tigers

Carcharias taurus Rafinesque-Schmaltz, 1810 – Sand tiger shark; Pamuk balığı

Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, worldwide in warm seas except for the East Pacific.

Conservation. Critically endangered in Turkey (CR). Listed as vulnerable worldwide by IUCN (POLLARD & SMITH 2006), but as critically endangered in the Mediterranean (ABDALLA 2004). Threats: FIB, EUT, AQU. Very sensitive to human activities. No keystone species. Severe decline. High priority for conservation action.

Odontaspis ferox (Risso, 1810) – Smalltooth sand tiger; Pamuk balığı

Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, worldwide in tropical and temperate waters on continental and insular shelves and slopes.

Conservation. Critically endangered in Turkey (CR). Listed as critically endangered in the Mediterranean by IUCN (ABDALLA 2004). Threats: FIB, EUT, AQU. Very sensitive to human activities. No keystone species. Severe decline. High priority for conservation action.

Alopiidae – Thresher sharks

Alopias superciliosus (Lowe, 1841) – Bigeye thresher; Sapan balığı

Distribution. Aegean Sea. Turkey region: AS. Only a single specimen of ca. 350 cm was reported to date, from Gökova Bay (Mater 2005). In the Mediterranean Sea, more common at the western basin (Megalofonou et al. 2005). Outside the area, worldwide in tropical and temperate seas.

Conservation. Endangered in Turkey (EN). Threats: FIB. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action. Highly migratory species, listed on Annex I of the 1982 Convention on the Law of the Sea (Anonymus 1994).

Alopias vulpinus (Bonnaterre, 1788) – Thintail thresher; Sapan balığı

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional water and marine. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, worldwide in tropical and temperate seas.

Conservation. Endangered in Turkey (EN). Listed as vulnerable by IUCN (Fowler 2006). Threats: FIB. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action. Highly migratory species, listed on Annex I of the 1982 Convention on the Law of the Sea (Anonymus 1994).

Cetorhinidae – Basking sharks

Cetorhinus maximus (Gunnerus, 1765) – Basking shark; Büyük camgöz balığı

Distribution. Aegean Sea and Mediterranean Sea. Most observations in Turkey around Mersin coast. Marine species. Turkey regions: AS, MS. Outside the area, cosmopolitan, mostly in temperate seas.

Conservation. Threatened migrant in Turkey (TM). Threats: FIT, FIB. Rare. Sensitive to human activities. Keystone species. Severe decline. High priority for conservation action. Highly migratory species, listed on Annex I of the 1982 Convention on the Law of the Sea (Anonymus 1994). International trade restricted (CITES Appendix II, since 28 May 2003). Listed on Annex II of the Bern Convention (Anonymus 1979). Proposed for Annex IV of the EU Habitats Directive.

Lamnidae – Mackerel sharks

Carcharodon carcharias (Linnaeus, 1758) – Great white shark; Canavar balığı, büyük beyaz köpekbalığı

Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, worldwide in warm temperate seas.

Conservation. Critically endangered in Turkey (CR). Threats: FIT, FIB, PRL. Rare. Very sensitive to human activities. No keystone species. Severe decline. High priority for conservation action. Listed on Appendix II of the Bern Convention (Anonymus 1979); CITES Appendix III, since 28 May 2003; CMS Appendices I and II. Proposed for Annexes II and IV of the EU Habitats Directive.

Isurus oxyrinchus Rafinesque-Schmaltz, 1810 – Shortfin mako; Dikburun canavar, canavar balığı

Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, worldwide in tropical and temperate seas.

Conservation. Threatened migrant in Turkey (TM). Threats: FIT, FIB. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Lamna nasus (Bonnaterre, 1788) – Porbeagle; Dikburunkarkarias balığı, dikburun

Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, worldwide in temperate seas.

Conservation. Critically endangered in Turkey (CR). Northeast Atlantic population listed as critically endangered (CR) by IUCN (Stevens et al. 2006). Threats: FIT, FIB. Sensitive

to human activities. No keystone species. Severe decline. High priority for conservation action.

Scyliorhinidae – Catsharks

Galeus melastomus Rafinesque-Schmaltz, 1810 – Blackmouth catshark; Lekelikedi balığı
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and Northeast Atlantic from Senegal to Norway.
Conservation. Vulnerable in Turkey (VU). Threats: FIT, FIB. Sensitive to human activities. No keystone species. Significant decline. Medium priority for conservation action.

Scyliorhinus canicula (Linnaeus, 1758) – Small-spotted catshark; Dişlikedi balığı, kedi köpekbalığı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional water and marine species. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean Sea and Northeast Atlantic from Senegal to Norway.
Conservation. Vulnerable in Turkey (VU). Threats: FIT, FIB. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Scyliorhinus stellaris (Linnaeus, 1758) – Nursehound; Bozlekelikedi balığı, kedi köpekbalığı
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea; Northeast Atlantic from Morocco to Norway.
Conservation. Endangered in Turkey (EN). Threats: FIT, FIB. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Triakidae – Houndsharks

Galeorhinus galeus (Linnaeus, 1758) – Tope shark; Camgöz balığı
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, worldwide in temperate seas except the Northwest Pacific.
Conservation. Data deficient in Turkey (DD). Threats: FIT, FIB. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Mustelus asterias Cloquet, 1821 – Starry smooth-hound; Köpek balığı
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and northeastern Atlantic from North Sea to Canary Islands and Mauritania.
Conservation. Data deficient in Turkey (DD). Threats: FIT, FIB. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Mustelus mustelus (Linnaeus, 1758) – Smooth-hound; Adi köpek balığı
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from British Isles to South Africa.
Conservation. Data deficient in Turkey (DD). Threats: FIT, FIB. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Mustelus punctulatus Risso, 1827 – Black-spotted smooth-hound; Benekli köpek balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and northeastern Atlantic from Morocco to Western Sahara.
Conservation. Data deficient in Turkey (DD). Threats: FIT, FIB. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Carcharhinidae – Requiem sharks

Carcharhinus altimus Springer, 1950 – Bignose shark; Köpek balığı

Distribution. Mediterranean Sea. Known only by a single record from Iskenderun Bay, Turkey (Başusta & Erdem 2000: 4). Marine species. Turkey region: MS. Outside the area, worldwide in temperate seas.

Conservation. Endangered in Turkey (EN). Threats: FIT, FIB. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Carcharhinus brevipinna (Müller & Henle, 1839) – Spinner shark; Sivriburun camgöz

Distribution. Aegean Sea, Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, in tropical and warm temperate waters of the Atlantic and Indo-West Pacific.

Conservation. Endangered in Turkey (EN). Threats: FIT, FIB. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Carcharhinus limbatus (Müller & Henle, 1839) – Blacktip shark; Köpek balığı

Distribution. Mediterranean Sea. Marine species. Turkey region: MS. Outside the area, worldwide in tropical and warm temperate seas.

Conservation. Endangered in Turkey (EN). Threats: FIT, FIB. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Carcharhinus melanopterus (Quoy & Gaimard, 1824) – Blacktip reef shark; Siyah yüzgeçli köpekbalığı

Taxonomy. Although several records of this species are available from the Mediterranean, no specimens were hitherto preserved. Ben-Tuvia (1966) remarked that the superficial appearance of this species, especially its black fin tips, are also characteristic of other indigenous closely related species. It is no longer considered as a Lessepsian immigrant (Golani et al. 2002).

Distribution. Mediterranean Sea. Records need verification. Marine species. Turkey region: MS. Outside the area, Indo-West Pacific.

Conservation. Data deficient in Turkey (DD). Threats: FIT, FIB. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Carcharhinus plumbeus (Nardo, 1827) – Sandbar shark; Büyük camgöz balığı, kum köpekbalığı

Distribution. Aegean Sea, Mediterranean Sea. Boncuk Cove in Gökova Bay (southern Aegean Sea) is the only known breeding zone of this species in the Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, worldwide in tropical and warm temperate waters.

Conservation. Endangered in Turkey (EN). Threats: FIT, FIB. Since a couple of years, Boncuk Cove has been visited by several dive tourists; shark tourism may have an additional negative impact on the local population in the coming years. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Prionace glauca (Linnaeus, 1758) – Blue shark; Maviköpek balığı, pamuk balığı

Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, worldwide in tropical and temperate waters.

Conservation. Threatened migrant in Turkey (TM). Threats: FIT, FIB. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Sphyrnidae – Hammerhead sharks

Sphyrna tudes (Valenciennes, 1822) – Smalleye hammerhead; Çekiç balığı

Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea; warm temperate waters of Southwest Atlantic and eastern Pacific.

Conservation. Threatened migrant in Turkey (TM). Threats: FIT, FIB. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Sphyrna zygaena (Linnaeus, 1758) – Smooth hammerhead; Çekiç balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, worldwide in tropical and temperate seas.
Conservation. Threatened migrant in Turkey (TM). Threats: FIT, FIB. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Hexanchidae – Cow sharks

Heptranchias perlo (Bonnaterre, 1788) – Sharpnose sevengill shark; Yediyarıklıcanavar balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, circumglobal but antiequatorial in tropical and temperate seas, excluding the Northeast Pacific.
Conservation. Data deficient in Turkey (DD). Threats: FIB, EUT, AQU. Rare. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action.

Hexanchus griseus (Bonnaterre, 1788) – Bluntnose sixgill shark; Boz balığı, boz camgöz
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, almost circumglobal in warm and temperate seas.
Conservation. Vulnerable in Turkey (VU). Threats: FIB, EUT, AQU. Rare. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Highly migratory species, listed on Annex I of the 1982 Convention on the Law of the Sea (Anonymus 1994).

Echinorhinidae – Bramble sharks

Echinorhinus brucus (Bonnaterre, 1788) – Bramble shark; Çiviliköpek balığı
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, worldwide in temperate waters except for eastern Pacific.
Conservation. Data deficient in Turkey (DD). Threats: FIB. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Squalidae – Dogfish sharks

Squalus acanthias Linnaeus, 1758 – Piked dogfish; Katran balığı, mahmuzlu camgöz
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional water and marine. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, worldwide in tropical and temperate waters except for Indian Ocean.
Conservation. Endangered in Turkey (EN). Listed as endangered in the Mediterranean Sea, and vulnerable in the Black Sea, by IUCN (Fordham et al. 2006). Threats: FIT. Sensitive to human activities. Keystone species. Significant decline. High priority for conservation action. Proposed for Annexes II and V of the EU Habitats Directive.

Squalus blainville (Risso, 1827) – Longnose spurdog; Gricamgöz balığı, mahmuzlu camgöz
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional water and marine. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, eastern Atlantic and Northwest Pacific, possibly more widespread.
Conservation. Endangered in Turkey (EN). Threats: FIT. Sensitive to human activities. Keystone species. Significant decline. High priority for conservation action. Proposed for Annexes II and V of the EU Habitats Directive.

Centrophoridae – Gulper sharks

Centrophorus granulosus (Bloch & Schneider, 1801) – Gulper shark; Köpek balığı

Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea, eastern Atlantic, Gulf of Mexico, Indian Ocean, and antiequatorial in the western Pacific.

Conservation. Vulnerable in Turkey (VU). Listed as vulnerable for the Mediterranean Sea, and worldwide (Guallart et al. 2006). Threats: FIT, FIB, EUT. Rare. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Centrophorus uyato (Rafinesque-Schmaltz, 1810) – Little gulper shark; Köpek balığı

Distribution. Sea of Marmara. Probably also in Aegean Sea and Mediterranean Sea part of Turkey; data deficient. Marine species. Turkey region: MA. Outside the area, Mediterranean Sea, eastern Atlantic, Gulf of Mexico, Indian Ocean, and antiequatorial in the western Pacific.

Conservation. Vulnerable in Turkey (VU). Listed as vulnerable for the Mediterranean Sea, as part of *Centrophorus granulosus* (Guallart et al. 2006). Threats: FIT, FIB, EUT. Rare. Sensitivity to human activities unknown. No keystone species. Significant decline. Low priority for conservation action.

Etmopteridae – Lantern sharks

Etmopterus spinax (Linnaeus, 1758) – Velvet belly lantern shark; Mahmuzlu köpek balığı, kadife köpek balığı

Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic Ocean from Iceland and Norway to South Africa.

Conservation. Vulnerable in Turkey (VU). Threats: FIB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Oxynotidae – Rough sharks

Oxynotus centrina (Linnaeus, 1758) – Angular roughshark; Domuz balığı

Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from English Channel to Senegal.

Conservation. Vulnerable in Turkey (VU). Threats: FIT, FIB. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Dalatiidae – Kitefin sharks

Dalatias licha (Bonnaterre, 1788) – Kitefin shark; Küt burunlu köpek balığı

Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, in warm temperate waters of the Atlantic and Indo-West Pacific.

Conservation. Data deficient in Turkey (DD). Threats: FIT, FIB. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Squatinidae – Angelsharks

Squatina aculeata Cuvier, 1829 – Sawback angelshark; Keler balığı

Distribution. Aegean Sea, Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Morocco to Angola.

Conservation. Critically endangered in Turkey (CR). Listed as critically endangered in the Mediterranean Sea, and endangered globally, by IUCN (Morey et al. 2006a). Threats:

FIB, EUT. Very sensitive to human activities. No keystone species. Severe decline. High priority for conservation action.

Squatina oculata Bonaparte, 1840 – Smoothback angelshark; Keler balığı
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Morocco to Angola.
Conservation. Critically endangered in Turkey (CR). Listed as critically endangered in the Mediterranean Sea, and endangered globally, by IUCN (Morey et al. 2006a). Threats: FIB, EUT. Very sensitive to human activities. No keystone species. Severe decline. High priority for conservation action.

Squatina squatina (Linnaeus, 1758) – Angelshark; Keler balığı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional water and marine. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean Sea and eastern Atlantic from Norway to Canary Islands and Western Sahara.
Conservation. Critically endangered in Turkey (CR). Listed as critically endangered by IUCN (Morey et al. 2006b). Threats: FIB, EUT. Very sensitive to human activities. No keystone species. Severe decline. High priority for conservation action.

Torpedinidae – Electric rays

Torpedo marmorata Risso, 1810 – Spotted torpedo; Lekelielektrik balığı
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from North Sea to South Africa.
Conservation. Vulnerable in Turkey (VU). Threats: FIB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Torpedo nobiliana Bonaparte, 1835 – Atlantic torpedo; Elektrik balığı
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea; eastern Atlantic from North Sea to South Africa; western Atlantic from Nova Scotia/Canada to Brazil.
Conservation. Vulnerable in Turkey (VU). Threats: FIB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Torpedo torpedo Linnaeus, 1758 – Common torpedo; Beneklielektrik balığı
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Bay of Biscay to Angola.
Conservation. Vulnerable in Turkey (VU). Threats: FIB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Rhinobatidae – Guitarfish

Rhinobatos cemiculus Geoffroy Saint-Hilaire, 1817 – Blackchin guitarfish; Uzunkeler balığı, kemane balığı
Distribution. Aegean Sea and Mediterranean Sea including adjacent estuaries. Fresh water, transitional water and marine. Turkey regions: AS, MS; EM, AD, MD. Outside the area, Mediterranean Sea and eastern Atlantic from Portugal to Angola.
Conservation. Endangered in Turkey (EN). Threats: FIT, FIB, CON. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Rhinobatos rhinobatos (Linnaeus, 1758) – Common guitarfish; Uzunkeler balığı, kemane balığı
Distribution. Aegean Sea and Mediterranean Sea including adjacent estuaries. Fresh water,

transitional water and marine. Turkey regions: AS, MS; EM, AD, MD. Outside the area, Mediterranean Sea and eastern Atlantic from Bay of Biscay to Angola.

Conservation. Endangered in Turkey (EN). Threats: FIT, FIB, CON. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Rajidae – Skates

Dipturus batis (Linnaeus, 1758) – Blue skate; Kocaburunvatoz balığı

Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Norway to Senegal.

Conservation. Critically endangered in Turkey (CR). Listed as critically endangered in the Mediterranean Sea and globally by IUCN (Dulvy et al. 2006a). Threats: FIT, FIB, EUT. Sensitive to human activities. No keystone species. Severe decline. Extirpated by trawling from much of its former range (Roberts et al. 1998). High priority for conservation action.

Dipturus oxyrinchus (Linnaeus, 1758) – Longnose skate; Sivriburunvatoz balığı

Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Norway to Senegal, including Canary Islands and Madeira.

Conservation. Data deficient in Turkey (DD). Threats: FIT, FIB, EUT. Rare. Very sensitive to human activities. No keystone species. Significant decline. High priority for conservation action.

Leucoraja circularis (Couch, 1838) – Sandy ray; Kumvatozu balığı

Distribution. Aegean Sea. Probably also in Turkish part of Mediterranean Sea; data deficient. Marine species. Turkey region: AS. Outside the area, Mediterranean Sea and eastern Atlantic from Iceland and Norway south to Morocco, possibly to Senegal.

Conservation. Data deficient in Turkey (DD). Threats: FIT, FIB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Leucoraja fullonica (Linnaeus, 1758) – Shagreen ray; Dikenlivatoz balığı

Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from White Sea south to northern Morocco and Madeira.

Conservation. Data deficient in Turkey (DD). Threats: FIT, FIB, EUT. Rare. Very sensitive to human activities. No keystone species. Significant decline. High priority for conservation action.

Leucoraja naevus (Müller & Henle, 1841) – Cuckoo ray; Vatoz

Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from North Sea south to Senegal.

Conservation. Data deficient in Turkey (DD). Threats: FIT, FIB, EUT. Rare. Very sensitive to human activities. No keystone species. Significant decline. High priority for conservation action.

Raja asterias Delaroche, 1809 – Starry ray; Vatoz

Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Endemic to the Mediterranean Sea and marginally in the eastern Atlantic (Morocco).

Conservation. Endangered in Turkey (EN). Threats: FIT, FIB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Raja clavata Linnaeus, 1758 – Thornback ray; Deniztilkisi balığı, dikenli vatoz

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional water and marine. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Out-

side the area, Mediterranean Sea and eastern Atlantic from Iceland to Namibia (possibly South Africa).
Conservation. Vulnerable in Turkey (VU). Threats: FIT, FIB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Raja miraletus Linnaeus, 1758 – Brown ray; Aynalivatoz balığı, kahverengi vatoz
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Portugal to South Africa; also southwestern Indian Ocean.
Conservation. Data deficient in Turkey (DD). Threats: FIT, FIB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Raja montagui Fowler, 1910 – Spotted ray; Vatoz
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and Shetland Islands to Mauritania.
Conservation. Data deficient in Turkey (DD). Threats: FIT, FIB, EUT. Rare. Very sensitive to human activities. No keystone species. Significant decline. High priority for conservation action.

Raja polystigma Regan, 1923 – Speckled ray; Vatoz
Distribution. Aegean Sea. Probably also in Turkish part of Mediterranean Sea; data deficient. Marine species. Turkey region: AS. Endemic to Mediterranean Sea.
Conservation. Data deficient in Turkey (DD). Threats: FIT, FIB, EUT. Rare. Very sensitive to human activities. Local importance. No keystone species. Significant decline. High priority for conservation action.

Raja radula Delaroche, 1809 – Rough ray; Vatoz balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Endemic to Mediterranean Sea with marginal occurrence in eastern Atlantic (Morocco).
Conservation. Vulnerable in Turkey (VU). Threats: FIT, FIB, EUT. Rare. Very sensitive to human activities. No keystone species. Significant decline. High priority for conservation action.

Raja undulata Lacepède, 1802 – Undulate ray; Boyalivatoz balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from British Isles to Senegal.
Conservation. Endangered in Turkey (EN). Threats: FIT, FIB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Rostroraja alba (Lacepède, 1803) – Bottlenose skate, white skate; Vatoz
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from British Isles to South Africa, and Mozambique in southwestern Indian Ocean.
Conservation. Endangered in Turkey (EN). Listed as endangered in the Mediterranean Sea and globally by IUCN (Dulvy et al. 2006b). Threats: FIT, FIB, EUT. Rare. Very sensitive to human activities. No keystone species. Significant decline. High priority for conservation action.

Dasyatidae – Stingrays

Dasyatis centroura (Mitchill, 1815) – Roughtail stingray; Denizkedisi balığı, Iğneli vatoz
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and warm temperate waters of the Atlantic Ocean.
Conservation. Threatened migrant in Turkey (TM). Threats: FIT, FIB. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Dasyatis pastinaca (Linnaeus, 1758) – Common stingray; Iğneli vatoz
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional water and marine. Recorded from Koycegiz Lagoon/Dalyan River system by Akin et al. (2005: 676). Turkey regions: BS, MA, AS, MS; MD; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean Sea and eastern Atlantic from Norway to Guinea; South Africa to Comores, Madagascar and Réunion.
Conservation. Threatened migrant in Turkey (TM). Threats: FIT, FIB. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Dasyatis tortonesei Capapé, 1975 – Tortonese's stingray; Iğneli vatoz
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Endemic to Mediterranean Sea.
Conservation. Threatened migrant in Turkey (TM). Threats: FIT, FIB. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Himantura uarnak (Forsskål in Niebuhr, 1775) – Honeycomb stingray; Tirpana balığı, uzun kuyruklu rina
Distribution. Mediterranean Sea. Lessepsian immigrant into Mediterranean; not native to Turkey. Marine species. Turkey region: (MS). Outside the area, Indo-West Pacific from Red Sea, East and South Africa to French Polynesia.
Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Pteroplatytrygon violacea (Bonaparte, 1832) – Pelagic stingray; Rina
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea, western Atlantic, Cape Verde Islands and South Africa in eastern Atlantic, and eastern Pacific.
Conservation. Threatened migrant in Turkey (TM). Threats: FIB. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Taeniura grabata (Geoffroy Saint-Hilaire, 1817) – Round stingray; Tirpana balığı, yuvarlak rina
Distribution. Aegean Sea, Mediterranean Sea. Recently recorded from Datça Peninsula, southern Aegean Sea (Okuş et al. 2004). Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Canary Islands and Mauritania south to Angola; immigrated into Red Sea through Suez Canal.
Conservation. Data deficient in Turkey (DD). Threats: FIB. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Gymnuridae – Butterfly rays

Gymnura altavela (Linnaeus, 1758) – Spiny butterfly ray; Kazikkuyruk
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional water and marine. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean Sea, tropical and temperate coastal areas of the Atlantic Ocean.
Conservation. Threatened migrant in Turkey (TM). Threats: FIB. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Myliobatidae – Eagle rays

Myliobatis aquila (Linnaeus, 1758) – Common eagle ray; Denizkartali balığı, çuçuna
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from British Isles to South Africa.
Conservation. Threatened migrant in Turkey (TM). Threats: FIB. Sensitive to human activities. Keystone species. Significant decline. High priority for conservation action.

Pteromylaeus bovinus (Geoffroy Saint-Hilaire, 1817) – Bull ray; Fulya balığı, çuçuna
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Portugal to Angola; South Africa to Mozambique.
Conservation. Threatened migrant in Turkey (TM). Threats: FIB. Sensitive to human activities. Keystone species. Significant decline. High priority for conservation action.

Rhinoptera marginata (Geoffroy Saint-Hilaire, 1817) – Lusitanian cownose ray; Mandabas balığı, çuçuna
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Spain to Senegal.
Conservation. Threatened migrant in Turkey (TM). Threats: FIB. Sensitive to human activities. Keystone species. Significant decline. High priority for conservation action.

Mobula mobular (Bonnaterre, 1788) – Devil fish; Kulakli folya, manta
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Portugal to Senegal; possibly straying into western Atlantic and Indian Ocean.
Conservation. Threatened migrant in Turkey (TM). Threats: FIB. Sensitive to human activities. Keystone species. Significant decline. High priority for conservation action. Listed on Appendix II of the Bern Convention (Anonymus 1979).

Acipenseridae – Sturgeons

Acipenser gueldenstaedtii Brandt & Ratzeburg, 1833 – Russian sturgeon; Rusmersini balığı
Taxonomy. Recorded from Turkey by Kuru (2004: 9) under the name *Acipenser güldenstaedti*.
Distribution. Black Sea and Sea of Marmara and adjacent watersheds. Fresh water, transitional water and marine. Turkey regions: BS, MA; EB, BD. Outside the area, endemic to the Black Sea and Caspian Sea and adjacent watersheds.
Conservation. Critically endangered in Turkey (CR). Threats: FIT, FIB, HAB, EUT, CON, AQU. Local importance. Rare. Very sensitive to human activities. Keystone species. Severe decline. High priority for conservation action. International trade restricted (CITES II: since 1 Apr. 1998; CMS Appendix II). Listed on Annex V of the EU Habitats Directive. Proposed for Annex II of the EU Habitats Directive.

Acipenser nudiventris Lovetsky, 1828 – Fringebarbel sturgeon; Sip balığı
Distribution. Black Sea and Sea of Marmara and adjacent watersheds. Fresh water, transitional water and marine. Turkey regions: BS, MA; EB, BD. Outside the area, Black Sea, Azov Sea, Caspian Sea and Aral Sea and adjacent watersheds; extinct in Aral Sea.
Conservation. Critically endangered in Turkey (CR). Threats: FIT, FIB, HAB, EUT, CON, AQU. Local importance. Rare. Very sensitive to human activities. Keystone species. Severe decline. High priority for conservation action. International trade restricted (CITES II: since 1 Apr. 1998; CMS Appendix II). Listed on Annex V of the EU Habitats Directive. Proposed for Annex II of the EU Habitats Directive.

Acipenser persicus Borodin, 1897 – Persian sturgeon
Distribution. Kura-Aras River system. Fresh water, transitional water and marine (fresh water only in Turkey). Turkey region: CD. Endemic to Caspian Sea and adjacent watersheds.
Conservation. Extinct in Turkey (RE). Threats: FIT, FIB, HAB, EUT, CON, AQU. Local importance. Rare. Very sensitive to human activities. Keystone species. Severe decline. High priority for conservation action. International trade restricted (CITES II: since 1 Apr. 1998; CMS Appendix II). Listed on Annex V of the EU Habitats Directive.

Acipenser ruthenus Linnaeus, 1758 – Sterlet; Çuka balığı
Distribution. Black Sea watersheds. Fresh water and transitional water. Turkey regions: EB,

BD. Outside the area, endemic to Black Sea, Sea of Azov, White Sea and Caspian Sea watersheds.

Conservation. Critically endangered in Turkey (CR). Threats: FIT, FIB, HAB, EUT, CON, AQU. Local importance. Rare. Very sensitive to human activities. Keystone species. Severe decline. High priority for conservation action. International trade restricted (CITES II: since 1 Apr. 1998; CMS Appendix II). Listed on Annex V of the EU Habitats Directive.

Acipenser stellatus Pallas, 1770 – Starry sturgeon; Mersin balığı, sivruşka balığı

Distribution. Black Sea, Sea of Marmara and Aegean Sea and adjacent watersheds. Fresh water, transitional water and marine. Turkey regions: BS, MA, AS; EB, EM, AD, BD. Outside the area, endemic to Black Sea, Caspian Sea and Aegean Sea and adjacent watersheds.

Conservation. Critically endangered in Turkey (CR). Extinct in Aegean Sea (Meulenaer & Raymakers 1996). Threats: FIT, FIB, HAB, EUT, CON, AQU. Local importance. Rare. Very sensitive to human activities. Keystone species. Severe decline. High priority for conservation action. International trade restricted (CITES II: since 1 Apr. 1998; CMS Appendix II). Listed on Annex V of the EU Habitats Directive. Proposed for Annex II of the EU Habitats Directive.

Acipenser sturio Linnaeus, 1758 – Sturgeon; Kolan balığı

Distribution. Black Sea, Sea of Marmara and Aegean Sea and adjacent watersheds. Fresh water, transitional water and marine. Turkey regions: BS, MA, AS; EB, EM, AD, BD. Outside the area, European seas excluding Baltic Sea but including Mediterranean Sea and adjacent watersheds.

Conservation. Extinct in Turkey (RE). Threats: FIT, FIB, HAB, EUT, CON, AQU. Local importance. Rare. Very sensitive to human activities. Keystone species. Severe decline. High priority for conservation action. Listed on Appendix II of the Bern Convention (Anonymus 1979). International trade restricted (CITES II: since 1 Apr. 1998; CMS Appendix II). Listed on Annexes II and IV of the EU Habitats Directive.

Huso huso (Linnaeus, 1758) – Beluga; Mersin morinasi balığı

Distribution. Black Sea, Sea of Marmara and Aegean Sea and adjacent watersheds. Fresh water, transitional water and marine. Turkey regions: BS, MA, AS; EB, EM, AD, BD. Outside the area, endemic to Black Sea, Caspian Sea and Aegean Sea and adjacent watersheds.

Conservation. Critically endangered in Turkey (CR). Threats: FIT, FIB, HAB, EUT, CON, AQU. Local importance. Rare. Very sensitive to human activities. Keystone species. Severe decline. High priority for conservation action. Listed on Appendix II of the Bern Convention (Anonymus 1979). International trade restricted (CITES II: since 1 Apr. 1998; CMS Appendix II). Listed on Annex V of the EU Habitats Directive. Proposed for Annex II of the EU Habitats Directive.

Notacanthidae – Deep-sea spiny eels

Notacanthus bonaparte Risso, 1810 – Shortfin spiny eel; Çuçuna

Distribution. Mediterranean Sea. Probably also in Aegean Sea; data deficient. Marine species. Turkey region: MS. Outside the area, Mediterranean Sea and eastern Atlantic from Iceland and Faroes to Mauritania.

Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Anguillidae – Freshwater eels

Anguilla anguilla (Linnaeus, 1758) – European eel; Yilan balığı

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea and adjacent watersheds. Fresh water, transitional water and marine. Turkey regions: BS, MA, AS,

MS; EB, EM, AD, MD, OD, BD. Outside the area, European seas and adjacent watersheds, and spawning and larval migration routes to and from tropical West Atlantic.

Conservation. Critically endangered in Turkey (CR). Threats: FIT, FIB, HAB, CON, PAR. Very sensitive to human activities. Keystone species. Though adults of this long-lived species may still be reasonably common in parts of its distribution range, and it may be subject to aquaculture, the number of postlarvae arriving in Europe and in the Mediterranean Sea is severely declining; the species is critically endangered throughout its range (Fricke in press). High priority for conservation action.

Chlopsidae – False morays

Chlopsis bicolor Rafinesque-Schmaltz, 1810 – Bicoloured false moray; Yalanci migri

Distribution. Mediterranean Sea. Marine species. Turkey region: MS. Outside the area, Mediterranean Sea and eastern Atlantic from Morocco to Mauritania; western Atlantic from Florida/USA to southern Brazil.

Conservation. Data deficient in Turkey (DD). Threats: EUT. Rare. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Muraenidae – Moray eels

Enchelycore anatina (Lowe, 1838) – Fangtooth moray; Sivridişli müren

Distribution. Aegean Sea, Mediterranean Sea. Recently recorded from Datça Peninsula, southern Aegean Sea (Okuş et al. 2004). Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea; islands of tropical and temperate eastern Atlantic.

Conservation. Data deficient in Turkey (DD). Threats: FIT, EUT. Rare. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Gymnothorax unicolor (Delaroche, 1809) – Brown moray; Kahverengi müren

Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Portugal and Azores to Cape Verde Islands.

Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Muraena helena Linnaeus, 1758 – Mediterranean moray; Müren

Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from British Isles to Cape Verde Islands.

Conservation. Vulnerable in Turkey (VU). Threats: FIT, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Ophichthidae – Snake eels

Apterichtus caecus (Linnaeus, 1758) – European finless eel

Distribution. Mediterranean Sea. Probably also in the Aegean Sea. **New record** from Turkey based on a single specimen of 291 mm total length that was captured and photographed on 3 Oct. 2005, at a depth of 1 m from Kaş, Antalya (36°12′03″N 29°37′30″E). Marine species. Turkey region: MS. Outside the area, Mediterranean Sea and eastern Atlantic from Azores to Gulf of Guinea.

Conservation. Data deficient in Turkey (DD). Threats: EUT, HAB. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Dalophis imberbis (Delaroche, 1809) – Armless snake eel; Yilan balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Spain to Mauritania.
Conservation. Data deficient in Turkey (DD). Threats: EUT, HAB. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Echelus myrus (Linnaeus, 1758) – Painted eel; Mirmir yilan balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Bay of Biscay to Congo.
Conservation. Data deficient in Turkey (DD). Threats: EUT, HAB. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Ophichthus rufus (Rafinesque-Schmaltz, 1810) – Rufus snake eel; Yilankurdu balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Endemic to Mediterranean Sea.
Conservation. Data deficient in Turkey (DD). Threats: EUT, HAB. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Ophisurus serpens (Linnaeus, 1758) – Serpent eel; Dikenli yilan balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Spain to South Africa; Mozambique to South Africa in southwestern Indian Ocean; Japan; Australia.
Conservation. Data deficient in Turkey (DD). Threats: EUT, HAB. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Congridae – Conger eels

Ariosoma balearicum (Delaroche, 1809) – Bandtooth conger; Balerik migrisi
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Portugal to Angola, western Atlantic from North Carolina/USA to Guayana; western Indian Ocean including Red Sea.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Conger conger (Linnaeus, 1758) – European conger; Migri
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional water and marine. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean Sea and eastern Atlantic from Iceland and Norway to Senegal.
Conservation. Data deficient in Turkey (DD). Threats: FIT, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Gnathophis mystax (Delaroche, 1809) – Thinlip conger; Migri
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from southern Portugal to Morocco.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Nemichthyidae – Snipe eels

Nemichthys scolopaceus Richardson, 1848 – Slender snipe eel

Distribution. Aegean Sea. Recorded from Turkey by Bilecenoglu et al. (in press). Marine species. Turkey region: AS. Outside the area, worldwide in tropical and temperate oceans.

Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Nettastomatidae – Duckbill eels

Facciolella oxyrhyncha (Bellotti, 1883) – Facciola's sorcerer

Distribution. Mediterranean Sea. To be recorded by Golani et al. (in press). Marine species. Turkey region: MS. Outside the area, northwestern Mediterranean Sea and eastern Atlantic from southern Portugal south to Angola.

Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Nettastoma melanurum Rafinesque-Schmaltz, 1810 – Blackfin sorcerer

Distribution. Mediterranean Sea. Probably also in Aegean Sea; data deficient. Marine species. Turkey region: MS. Outside the area, Mediterranean Sea and tropical and warm temperate Atlantic Ocean.

Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Engraulidae – Anchovies

Engraulis encrasicolus (Linnaeus, 1758) – European anchovy; Hamsi balığı

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea and estuaries of adjacent watersheds. Transitional water and marine. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean Sea and eastern Atlantic from Norway to South Africa, including adjacent parts of southwestern Indian Ocean in upwelling areas.

Conservation. Vulnerable in Turkey (VU). Threats: FIT, FIB. Sensitive to human activities. Keystone species. Probable decline. Medium priority for conservation action.

Clupeidae – Herrings, shads, sardines and menhadens

Alosa agone (Scopoli, 1786) – Italian shad; Tirsi balığı

Taxonomy. *Alosa nilotica* (Geoffroy Saint-Hilaire, 1809) is a junior synonym. Recorded from Turkey by Kuru (2004: 9) under the name *Alosa fallax nilotica.*

Distribution. Black Sea, Sea of Marmara, Aegean Sea, Mediterranean Sea and adjacent watersheds. Fresh water, transitional water and marine. Turkey regions: BS, MA, AS, MS; EB, EM, BD, AD, MD, OD. Endemic to the Mediterranean Sea and its watersheds.

Conservation. Critically endangered in Turkey (CR). Threats: FIT, FIB, HAB, EUT, CON, ABS. Rare. Very sensitive to human activities. Keystone species. Severe decline. High priority for conservation action. Listed on Annexes II and V of the EU Habitats Directive (as *Alosa* spp.).

Alosa braschnikovi (Borodin, 1904) – Caspian marine shad

Distribution. Kura-Aras watersheds. Fresh water, transitional water and marine (fresh water only in Turkey). Turkey region: CD. Endemic to the Caspian Sea and its watersheds.

Conservation. Extinct in Turkey (RE). Threats: FIT, FIB, HAB, EUT, CON, ABS. Local importance. Very sensitive to human activities. Keystone species. Severe decline. High

priority for conservation action. Listed on Annexes II and V of the EU Habitats Directive (as *Alosa* spp.).

Alosa caspia (Eichwald, 1838) – Caspian shad; Tirsi balığı
Distribution. Kura-Aras watersheds. Fresh water, transitional water and marine (fresh water only in Turkey). Turkey region: CD. Endemic to the Caspian Sea and its watersheds.
Conservation. Extinct in Turkey (RE). Threats: FIT, FIB, HAB, EUT, CON, ABS. Local importance. Very sensitive to human activities. Keystone species. Severe decline. High priority for conservation action. Listed on Annexes II and V of the EU Habitats Directive (as *Alosa* spp.).

Alosa immaculata (Bennett, 1835) – Spotless shad; Ringa balığı, tirsi balığı
Taxonomy. *Alosa pontica* Eichwald, 1838 is a commonly used synonym (e.g. Kuru 2004: 9).
Distribution. Black Sea watersheds. Fresh water, transitional water and marine. Turkey regions: BS; EB, BD. Endemic to the Black Sea and its watersheds.
Conservation. Endangered in Turkey (EN). Threats: FIT, FIB, HAB, EUT, CON, ABS. Local importance. Sensitive to human activities. Keystone species. Severe decline. High priority for conservation action. Listed on Annexes II and V of the EU Habitats Directive (as *Alosa* spp.).

Alosa maeotica (Grimm, 1901) – Black Sea shad; Ringa balığı
Distribution. Black Sea watersheds. Fresh water, transitional water and marine. Turkey regions: BS; EB, BD. Endemic to the Black Sea and its watersheds.
Conservation. Endangered in Turkey (EN). Threats: FIT, FIB, HAB, EUT, CON, ABS. Local importance. Sensitive to human activities. Keystone species. Severe decline. High priority for conservation action. Listed on Annexes II and V of the EU Habitats Directive (as *Alosa* spp.).

Alosa tanaica (Grimm, 1901) – Azov shad; Tirsi balığı
Distribution. Black Sea and Sea of Marmara watersheds. Fresh water, transitional water and marine. Turkey regions: BS, MA; EB, BD. Endemic to the Black Sea and its watersheds.
Conservation. Endangered in Turkey (EN). Threats: FIT, FIB, HAB, EUT, CON, ABS. Local importance. Sensitive to human activities. Keystone species. Severe decline. High priority for conservation action. Listed on Annexes II and V of the EU Habitats Directive (as *Alosa* spp.).

Clupeonella cultriventris (Nordmann, 1840) – Black Sea sprat; Filisa balığı, tülka balığı
Distribution. Black Sea and Sea of Marmara and adjacent watersheds. Transitional water and marine. Turkey regions: BS, MA; EB, BD. Endemic to the Black Sea and its watersheds.
Conservation. Data deficient in Turkey (DD). Threats: FIT, FIB. Sensitive to human activities. Keystone species. Probable decline. Medium priority for conservation action.

**Clupeonella muhlisi* Neu in Woltereck & Neu, 1934 – Marmara sprat, Apolyont sprat; Filisa balığı
Taxonomy. This species was named *Clupeonella abrau muhlisi* by authors, e.g. Kuru (2004: 10).
Distribution. Apolyont Lake. Transitional water and marine. Turkey regions: MA; EM, AD. Endemic to the area.
Conservation. Endangered in Turkey (EN). Threats: FIT, FIB, EUT. Global importance. Sensitive to human activities. Keystone species. Significant decline. High priority for conservation action. Proposed for Annexes II and IV of the EU Habitats Directive.

Dussumieria elopsoides Bleeker, 1849 – Slender rainbow sardine; Hint sardalyasi
Distribution. Mediterranean Sea. Marine species. Turkey region: (MS). Lessepsian immigrant into Mediterranean; originally Indo-West Pacific from Red Sea and East Africa east to Solomon Islands; not native to Turkey.

Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Etrumeus teres (DeKay, 1842) – Round herring; Akdeniz hamsisi, kizilgözlü sardalya
Distribution. Mediterranean Sea. Recently recorded from Datça Peninsula, southern Aegean Sea (Okuş et al. 2004). Marine species. Turkey region: (MS). Lessepsian immigrant into Mediterranean; originally in Western Indian Ocean and Red Sea as well as several other tropical and temperate seas; not native to Turkey.
Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Herklotsichthys punctatus (Rüppell, 1837) – Spotback herring; Benekli sardalya
Distribution. Mediterranean Sea. Marine species. Turkey region: (MS). Lessepsian immigrant into Mediterranean; originally in Western Indian Ocean and Red Sea; not native in Turkey.
Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Sardina pilchardus (Walbaum, 1792) – European pilchard; Ateş balığı, sardalya
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea including adjacent estuaries and lower reaches of watersheds. Transitional water and marine. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, OD, BD. Outside the area, Mediterranean Sea and eastern Atlantic from Iceland south to Senegal.
Conservation. Near threatened in Turkey (NT). Threats: FIT, FIB. Sensitive to human activities. Keystone species. Probable decline. Medium priority for conservation action.

Sardinella aurita (Valenciennes in Cuvier & Valenciennes, 1847) – Round sardinella; Büyük sardalya
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Recorded from Koycegiz Lagoon/Dalyan River system by Akin et al. (2005: 676). Transitional water and marine. Turkey regions: BS, MA, AS, MS; MD. Outside the area, Mediterranean and Black Seas, and both sides of the equatorial and warm temperate Atlantic Ocean, in the east from Gibraltar to South Africa.
Conservation. Vulnerable in Turkey (VU). Threats: FIT, FIB. Sensitive to human activities. Keystone species. Probable decline. Medium priority for conservation action.

Sardinella maderensis (Lowe, 1838) – Madeiran sardinella; Beneklisardalya balığı, tirsi
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Gibraltar to Angola; penetrating through the Suez Canal into the northern Red Sea.
Conservation. Data deficient in Turkey (DD). Threats: FIT, FIB. Sensitive to human activities. Keystone species. Probable decline. Medium priority for conservation action.

Sprattus sprattus (Linnaeus, 1758) – European sprat; Papalina balığı, çaça
Taxonomy. Synonym: *Clupanodon phalerica* Risso, 1827.
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea and estuaries of adjacent watersheds. Fresh water, transitional water and marine. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean Sea and eastern Atlantic from North Sea south to Morocco.
Conservation. Vulnerable in Turkey (VU). Threats: FIT, FIB. Sensitivity to human activities unknown. Keystone species. Probable decline. Medium priority for conservation action.

Cyprinidae – Carps and minnows

Abramis bjoerkna (Linnaeus, 1758) – White bream; Zahta balığı
Taxonomy. Synonyms: *Blicca bjoerkna*; *Blicca bjoerkna transcaucasica* Berg, 1916. Record-

ed from Turkey by Kuru (2004: 11) under the names *Blicca bjoerkna bjoerkna* and *B. bjoerkna transcaucasica*.

Distribution. Black Sea watersheds of European Turkey and Kura-Aras watersheds. Fresh water and transitional water. Turkey regions: EB, CD. Outside the area, Europe from France to Ural.

Conservation. Data deficient in Turkey (DD). Threats: CON. Not sensitive to human activities. No keystone species. Stable populations. Low priority for conservation action.

Abramis brama (Linnaeus, 1758) – Carp bream; Abdalca, çapak balığı

Distribution. Black Sea watersheds of European Turkey and Kura-Aras watersheds. Fresh water and transitional water. Turkey regions: EB, CD. Outside the area, central and eastern Europe from France to the Ural including Danube system, but excluding Italy and Balcans.

Conservation. Data deficient in Turkey (DD). Threats: CON. Not sensitive to human activities. Keystone species. Stable populations. Low priority for conservation action.

Acanthalburnus microlepis (Filippi, 1863) – Blackbrow bleak; İnci balığı

Taxonomy. Recorded from Turkey by Kuru (2004: 10) under the name *Acanthobrama microlepis*.

Distribution. Kura-Aras watersheds. Fresh water species. Turkey regions: CD; (GD). Originally endemic to Kura-Aras River system; introduced into Gulf watersheds according to Coad (1991: 13).

Conservation. Data deficient in Turkey (DD). Threats: EUT, CON. Rare. Sensitive to human activities. No keystone species. Probable decline. Medium priority for conservation action.

**Acanthobrama centisquama* Heckel, 1843 – Orontes bream

Distribution. Asi Nehri/Orontes watershed. Fresh water species. Turkey region: OD. Endemic to Asi Nehri/Orontes system. Erroneously recorded from Gulf watersheds; record rejected by Coad (1991: 23).

Conservation. Critically endangered in Turkey (CR). Threats: HAB, EUT, CON, ABS. Global importance. Rare. Very sensitive to human activities. No keystone species. Severe decline. High priority for conservation action.

Acanthobrama marmid Heckel, 1843 – Tigris bream; Tahta balığı

Distribution. Asi Nehri/Orontes, Quwayq and Euphrates/Firat Nehri-Tigris/Dicle Nehri watersheds. Fresh water species. Turkey regions: OD, QD, GD. Endemic to Tigris-Euphrates, Quwayq and Orontes systems.

Conservation. Endangered in Turkey (EN). Critically endangered in Quwayq and Orontes systems, data deficient in Euphrates-Tigris system. Threats: HAB, EUT, CON, ABS. Local importance. Rare. Very sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive.

**Acanthobrama mirabilis* Ladiges, 1960 – Menderes bream; Ulubat balığı

Distribution. Büyük Menderes watershed including Bafa Gölü. Fresh water and transitional water. Turkey regions: AD, WL. Endemic to Büyük Menderes watershed and Bafa Gölü.

Conservation. Endangered in Turkey (EN) (Sary & Bilecenoglu 2002). Extinct in Bafa Gölü. Threats: HAB, EUT, CON, ABS. Threatened by water abstraction (Crivelli 1996); in Bafa Gölü by increased salinity (Sari et al. 1999). Global importance. Rare. Very sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive.

Acanthobrama tricolor (Lortet, 1883) – Syrian bream; Küçükgördek balığı

Distribution. Southeastern Turkey. Fresh water species. Turkey region: GD. Endemic to lakes near Damascus and in southeastern Turkey.

Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT, CON, ABS. Local im-

portance. Rare. Very sensitive to human activities. No keystone species. Probable decline. High priority for conservation action.

Alburnoides bipunctatus (Bloch, 1782) – Chub; Noktalı inci balığı
Taxonomy. Recorded from Turkey by Kuru (2004: 10) under the name *Alburnoides bipunctatus fasciatus* (Nordmann, 1840).
Distribution. Widespread in western, northern, central and southeastern Turkey. Fresh water species. Turkey regions: EB, EM, AD, WL, CL, EL, BD, GD. Outside the area, France and central Europe east to Caspian and Aral Sea basins and western Iran.
Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT, CON, ABS. Local importance. Sensitive to human activities. Keystone species. Significant/regional decline. High priority for conservation action.

Alburnoides eichwaldii (Filippi, 1863) – Kura chub; Noktali inci balığı
Taxonomy. Recorded from Turkey by Kuru (2004: 10) under the name *Alburnoides bipunctatus eichwaldi.*
Distribution. Endemic to Kura-Aras River system. Fresh water species. Turkey region: CD.
Conservation. Vulnerable in Turkey (VU). Threats: EUT, CON. Local importance. Rare. Sensitive to human activities. Keystone species. Probable decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive.

**Alburnus adanensis* Battalgazi, 1944 – Adana bleak; Inci balığı
Taxonomy. Treated by Bogutskaya (1997: 167) as a valid subspecies of *Alburnus sellal.* Recorded from Turkey by Kuru (2004: 11) under the name *Alburnus sellal adanensis.*
Distribution. Ceyhan and Seyhan river watersheds. Fresh water species. Turkey region: MD. Endemic to the area.
Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT, CON, ABS. Global importance. Sensitive to human activities. Keystone species. Significant/regional decline. High priority for conservation action.

**Alburnus akili* (Battalgil, 1942) – Beysehir bleak; Gökçe balığı
Distribution. Beyşehir Gölü system. Fresh water species. Turkey region: CL. Endemic to the area.
Conservation. Critically endangered in Turkey (CR). Threats: HAB, EUT, CON, ABS, AQU. Especially threatened by eutrophication/pollution and introduction of *Sander lucioperca*. Global importance. Sensitive to human activities. Keystone species. Severe decline. High priority for conservation action.

Alburnus albidus (Costa, 1838) – Italian bleak; Inci balığı
Taxonomy. Treated as a valid subspecies of *Alburnus alburnus* (Linnaeus, 1758) by authors. Recorded from Turkey by Kuru (2004: 10) under the name *Alburnus alburnus alburnus.*
Distribution. Lakes in western Anatolia. Fresh water species. Turkey region: WL. Outside the area, Italy and Croatia.
Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT, CON. Local importance. Sensitive to human activities. Keystone species. Probable decline. High priority for conservation action.

**Alburnus baliki* Bogutskaya, Kucuk & Unlu, 2000 – Manavgat bleak
Distribution. Endemic to Manavgat River, Province Antalya. Fresh water species. Turkey region: MD. Endemic to the area.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS. Global importance. Rare. Sensitive to human activities. Keystone species. Significant decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive.

Alburnus caeruleus Heckel, 1843 – Tigris bleak
Taxonomy. Recorded from Turkey by Kuru (2004: 11) under the name *Alburnus coeruleus.*
Distribution. Tigris/Dicle Nehri, Euphrates/Firat Nehri and Quwayq systems. Fresh wa-

ter species. Turkey regions: QD, GD. Endemic to Tigris/Dicle Nehri, Euphrates/Firat Nehri and Quwayq systems.

Conservation. Vulnerable in Turkey (VU). Vulnerable in Euphrates-Tigris system, extinct in Quwayq system. Threats: HAB, EUT, CON, ABS. Local importance. Sensitive to human activities. Keystone species. Significant/regional decline. High priority for conservation action.

Alburnus chalcoides (Güldenstädt, 1772) – Danube bleak; Tatlisu kolyoz balığı

Taxonomy. Confused with *Chalcalburnus mossulensis* (non Heckel, 1843) by Gül et al. (2000). Taxonomic decision as *Alburnus chalcoides* by Bogutskaya (1997: 165). Recorded from Turkey by Kuru (2004: 10) under the names *Alburnus chalcoides chalcoides* and *Alburnus chalcoides mento*.

Distribution. Black Sea and Caspian Sea watersheds of Turkey. Fresh water and transitional water. Introduced into several lake systems (Innal & Erk'akan 2006). Turkey regions: EB, BD, CD; (CL). Outside the area, widely distributed in Black Sea, Caspian Sea and Aral Sea watersheds.

Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON. Very sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. In Appendix III of the Bern Convention (protected fauna). Listed on Annex II of the EU Habitats Directive under the name *Chalcalburnus chalcoides*.

Alburnus escherichii Steindachner, 1897 – North Caucasian bleak

Taxonomy. Recorded from Turkey by Kuru (2004: 11) under the name *Alburnus escherichi*.

Distribution. Sakarya and Kızılırmak river systems. Fresh water and transitional water. Turkey region: BD. Endemic to Black Sea watersheds.

Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT, CON. Rare. Sensitive to human activities. Keystone species. Probable decline. Medium priority for conservation action.

Alburnus filippii Kessler, 1877 – Kura bleak

Distribution. Northeastern Turkey. Fresh water species. Turkey regions: BD, CD. Endemic to transcaucasian river systems around the Kura-Aras system.

Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT, CON. Local importance. Sensitive to human activities. Keystone species. Probable decline. High priority for conservation action.

**Alburnus heckeli* Battalgil, 1943 – Hazar bleak; Inci balığı

Distribution. Hazar Gölü, upper Tigris system. Fresh water species. Turkey regions: EL, GD. Endemic to the area.

Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT, CON, ABS, AQU. Global importance. Rare. Sensitive to human activities. Keystone species. Probable decline. High priority for conservation action.

Alburnus hohenackeri Kessler, 1877 – Transcaucasian bleak

Taxonomy. Recorded from Turkey by Kuru (2004: 10) under the name *Alburnus alburnus hohenacheri*.

Distribution. Endemic to the Kura-Aras River system. Fresh water species. Turkey region: CD.

Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON. Local importance. Rare. Sensitive to human activities. Keystone species. Significant decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive.

**Alburnus kotschyi* Steindachner, 1863 – Arsuz bleak

Distribution. Arsuz Çayı, Hatay Province. Fresh water and transitional water. Turkey region: MD. Endemic to the area.

Conservation. Critically endangered in Turkey (CR). Threats: HAB, EUT, CON, ABS. Global importance. Rare. Sensitive to human activities. Keystone species. Severe decline.

High priority for conservation action. Proposed for Annexes II and IV of the EU Habitats Directive, as a prioritary species.

Alburnus mossulensis Heckel, 1843 – Mossul bleak

Taxonomy. Questionably treated as synonym of *Alburnus sellal* by some authors. Taxonomic decision of Bogutskaya (1997: 166). Recorded from Turkey by Kuru (2004: 11) under the name *Alburnus mossulensis*. Synonym: *Chalcalburnus mossulensis*.

Distribution. Van Gölü, Firat Nehri/Euphrates and Dicle Nehri/Tigris watersheds. Fresh water species. Turkey regions: GD, VD, UD. Endemic to Tigris and Euphrates systems, three rivers in Iran, and Van Gölü.

Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS. Local importance. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive, as a prioritary species.

**Alburnus nasreddini* Battalgil, 1943 – Eber bleak

Distribution. Eber Gölü, Afyonkara Province. Fresh water species. Turkey region: CL. Endemic to the area.

Conservation. Critically endangered in Turkey (CR). Threats: HAB, EUT, CON, AQU, ABS. Global importance. Rare. Very sensitive to human activities. Keystone species. Severe decline. High priority for conservation action.

Alburnus orontis Sauvage, 1882 – Orontes bleak; Inci balığı

Distribution. Asi Nehri, Hatay Province. Fresh water and transitional water. Turkey region: OD. Endemic to the Asi Nehri/Orontes watershed.

Conservation. Critically endangered in Turkey (CR). Threats: HAB, EUT, CON, ABS. Local importance. Rare. Sensitive to human activities. Keystone species. Significant decline. High priority for conservation action. Proposed for Annexes II and IV of the EU Habitats Directive, as a prioritary species.

Alburnus pallidus Heckel, 1843 – Pale Orontes bleak

Taxonomy. Questionably a synonym of *Alburnus sellal* (see Bogutskaya 1997: 167).

Distribution. Southeastern Turkey from Asi Nehri/Orontes to Gulf watersheds. Fresh water and transitional water. Turkey regions: OD, QD, GD. Endemic to Orontes, Quwayq and Tigris-Euphrates river systems.

Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT, CON, ABS. Local importance. Sensitive to human activities. Keystone species. Significant/regional decline. High priority for conservation action.

Alburnus sellal Heckel, 1843 – Sellal bleak

Taxonomy. Recorded from Turkey by Kuru (2004: 11) under the name *Alburnus sellal sellal*.

Distribution. Southeastern Turkey from Asi Nehri/Orontes to Gulf watersheds. Fresh water and transitional water. Turkey regions: OD, QD, GD. Endemic to Orontes, Quwayq and Tigris-Euphrates river systems and systems running into northern and eastern Arabian Gulf.

Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT, CON, ABS. Local importance. Sensitive to human activities. Keystone species. Significant/regional decline. High priority for conservation action.

**Alburnus tarichi* Güldenstädt, 1814 – Van bleak; Incikefali balığı

Taxonomy. *Alburnus timarensis* Kuru, 1980 is a junior synonym (according to Bogutskaya 1997: 167).

Distribution. Van Gölü. Introduced into Burdur Gölü (Innal & Erk'akan 2006). Fresh water and transitional water. Turkey regions: (CL); VD. Endemic to the area.

Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS, AQU. Rare. Global importance. Sensitive to human activities. Keystone species. Probable decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive. This species should not be protected in Burdur Gölü, where it is not native.

Aspius aspius (Linnaeus, 1758) – Asp; Kocaağiz balığı

Taxonomy. Recorded from Turkey by Kuru (2004: 11) under the names *Aspius aspius aspius* and *Aspius aspius taeniatus* Berg, 1912.

Distribution. European Black Sea watersheds. Fresh water and transitional water. Turkey region: EB. Outside the area, Elbe River system/Germany east to Aral Sea watershed.

Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT, CON. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action. In Appendix III of the Bern Convention (protected fauna). Listed on Annexes II and V of the EU Habitats Directive.

Aspius vorax Heckel, 1843 – Tigris asp; Sis balığı

Distribution. Southeastern Turkey from Asi Nehri/Orontes to Gulf watersheds. Fresh water and transitional water. Turkey regions: OD, QD, GD. Endemic to Orontes, Quwayq and Tigris-Euphrates river systems.

Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT, CON, ABS. Local importance. Sensitive to human activities. No keystone species. Significant/regional decline. High priority for conservation action. Listed on Annexes II and V of the EU Habitats Directive (under the name *Aspius aspius*).

Barbus barbulus Heckel, 1843 – Orontes barbel; Bıyıklı balığı

Distribution. Southeastern Turkey from Asi Nehri/Orontes to Gulf watersheds. Fresh water species. Turkey regions: OD, QD, GD. Endemic to some river systems of SE Turkey, Syria and Iran.

Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS. Local importance. Sensitive to human activities. No keystone species. Significant/regional decline. High priority for conservation action. Listed on Annex V of the EU Habitats Directive (under the name *Barbus* spp.). Proposed for Annexes II and V of the EU Habitats Directive.

Barbus barbus (Linnaeus, 1758) – Barbel

Distribution. Black Sea watersheds of European part of Turkey. Fresh water species. Turkey region: EB. Outside the area, British Isles and France east to Black Sea watersheds.

Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT, CON. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action. Listed on Annex V of the EU Habitats Directive (under the name *Barbus* spp.).

Barbus cyclolepis Heckel, 1837 – Round-scaled barbel; Bıyıklı balığı

Taxonomy. *Barbus pergamonensis* Karaman, 1971 is a junior synonym (according to Bianco 1998: 132). Recorded from Turkey by Kuru (2004: 11) under the name *Barbus plebejus pergamonensis*.

Distribution. Aegean Sea watersheds. Fresh water species. Turkey regions: EM, AD. Endemic to watersheds into the northeastern and eastern Aegean Sea and western Black Sea.

Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT, CON, ABS. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action. Listed on Annexes II and V of the EU Habitats Directive (under the name *Barbus plebejus*).

**Barbus ercisianus* Karaman, 1971 – Ercis barbel

Taxonomy. Questionably a synonym of *Barbus plebejus* Bonaparte, 1839 (see Kottelat 1997: 50); however treated as a separate species by later authors, as *B. plebejus* is now restricted to Italy and Croatia. Recorded from Turkey by Kuru (2004: 11) under the name *Barbus plebejus ercisianus*.

Distribution. Van Gölü tributaries. Fresh water and transitional water. Turkey region: VD. Endemic to the area.

Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON. Global importance. Rare. Sensitive to human activities. No keystone species. Probable decline. High priority for conservation action. Listed on Annexes II and V of the EU Habitats Directive (under the name *Barbus plebejus*).

**Barbus escherichii* Steindachner, 1897 – Ankara barbel

Taxonomy. Recorded from Turkey by KURU (2004: 11) under the name *Barbus plebejus escherichi*.

Distribution. Northern Anatolian Black Sea watersheds, Anatolian Aegean Sea and Western Lakes watersheds. Fresh water species. Turkey regions: AD, WL, BD. Endemic to the area.

Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS. Global importance. Sensitive to human activities. No keystone species. Significant/regional decline. High priority for conservation action. Listed on Annex V of the EU Habitats Directive (under the name *Barbus* spp.). Proposed for Annexes II and V of the EU Habitats Directive.

Barbus grypus Heckel, 1843 – Tigris barbel; Bıyıklı balığı

Taxonomy. Recorded from Turkey by KURU (2004: 14) under the name *Tor grypus*.

Distribution. Firat Nehri/Euphrates and Dicle Nehri/Tigris watershed. Fresh water species. Turkey region: GD. Endemic to Euphrates and Tigris river systems.

Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT, CON, ABS. Local importance. Sensitive to human activities. No keystone species. Probable decline. Medium priority for conservation action. Listed on Annex V of the EU Habitats Directive (under the name *Barbus* spp.).

Barbus kersin Heckel, 1843 – Kersin barbel; Kersin balığı

Distribution. Southeastern Turkey from Asi Nehri/Orontes to Gulf watersheds. Fresh water species. Turkey regions: OD, QD, GD. Endemic to parts of Syria, Iran, and southeastern Turkey.

Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS. Local importance. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Listed on Annex V of the EU Habitats Directive (under the name *Barbus* spp.).

Barbus lacerta Heckel, 1843 – Kura barbel

Taxonomy. Recorded from Turkey by KURU (2004: 11) under the name *Barbus plebejus lacerta*.

Distribution. Northeastern Turkey in watersheds of Kura-Aras, and southeastern Turkey from eastern Mediterranean and Asi Nehri/Orontes to Gulf watersheds. Fresh water species. Turkey regions: MD, OD, QD, CD, GD. Endemic to Kura-Aras river systems and southeastern Turkey.

Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS. Local importance. Sensitive to human activities. No keystone species. Significant/regional decline. High priority for conservation action. Listed on Annex V of the EU Habitats Directive (under the name *Barbus* spp.).

**Barbus lorteti* Sauvage, 1882 – Lortet's barbel; Maya balığı

Distribution. Asi Nehri/Orontes River system. Fresh water species. Turkey region: OD. Endemic to the Asi Nehri/Orontes River system.

Conservation. Critically endangered in Turkey (CR). Threats: HAB, EUT, CON, ABS. Global importance. Rare. Sensitive to human activities. No keystone species. Severe decline. High priority for conservation action. Listed on Annex V of the EU Habitats Directive (under the name *Barbus* spp.).

Barbus mursa (Güldenstädt, 1773) – Mursa

Distribution. Kura-Aras River system. Fresh water species. Turkey region: CD. Endemic to Caspian Sea and Lake Namak watersheds.

Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action. Listed on Annex V of the EU Habitats Directive (under the name *Barbus* spp.).

Barbus subquincunciatus Günther, 1868 – Mesopotamian barbel
Distribution. Firat Nehri/Euphrates and Dicle Nehri/Tigris watershed. Fresh water species. Turkey region: GD. Endemic to Tigris and Euphrates systems.
Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT, CON, ABS. Sensitive to human activities. No keystone species. Probable decline. Medium priority for conservation action. Listed on Annex V of the EU Habitats Directive (under the name *Barbus* spp.).

Barbus tauricus Kessler, 1877 – Krimean barbel
Distribution. Black Sea watersheds. Fresh water species. Turkey region: BD. Endemic to watersheds around northern and western Black Sea.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS. Sensitive to human activities. No keystone species. Probable decline. Medium priority for conservation action. Listed on Annexes II and V of the EU Habitats Directive (under the name *Barbus plebejus*).

Barilius mesopotamicus Berg, 1932 – Mesopotamian minnow
Distribution. Firat Nehri/Euphrates and Dicle Nehri/Tigris watershed. Fresh water species. Turkey region: GD. Endemic to Tigris and Euphrates systems.
Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT, CON, ABS. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

**Capoeta angorae* (Hankó, 1925) – Ankara barb
Taxonomy. Recorded from Turkey by Kuru (2004: 12) under the name *Capoeta capoeta angorae*.
Distribution. Northern Anatolian Black Sea watersheds. Fresh water species. Turkey region: BD. Endemic to the area.
Conservation. Critically endangered in Turkey (CR). Threats: HAB, EUT, CON, ABS. Global importance. Sensitive to human activities. No keystone species. Severe decline. High priority for conservation action.

**Capoeta antalyensis* (Battalgil, 1943) – Antalya barb; Kara balığı
Distribution. Bay of Antalya watersheds (Antalya Province). Fresh water species. Turkey region: MD. Endemic to the area.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS. Global importance. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action.

**Capoeta baliki* Turan, Kottelat, Ekmekçi & İmamoğlu, 2006 – Sakarya barb
Taxonomy. Recently described by Turan et al. (2006a).
Distribution. Western Anatolian Black Sea watersheds. Freshwater species. Turkey region: BD. Endemic to the area.
Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT, CON, ABS. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

**Capoeta banarescui* Turan, Kottelat, Ekmekçi & İmamoğlu, 2006 – Banarescu's barb
Taxonomy. Recently described by Turan et al. (2006a).
Distribution. Çoruh River, northeastern Black Sea. Freshwater species. Turkey region: BD. Endemic to the area.
Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT, CON, ABS. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

**Capoeta barroisi* (Lortet in Barrois, 1894) – Tigris barb; Kara balığı, siraz balığı
Distribution. Eastern Mediterranean watersheds, Asi Nehri/Orontes watershed, and upper Firat Nehri/Euphrates and Dicle Nehri/Tigris watershed. Fresh water species. Turkey regions: MD, OD, GD. Endemic to the area.

Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS. Global importance. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action.

**Capoeta bergamae* Karaman, 1969 – Bergama barb
Taxonomy. Recorded from Turkey by Kuru (2004: 12) under the name *Capoeta capoeta bergamae*.
Distribution. Aegean Sea watersheds. Fresh water species. Turkey region: AD. Endemic to the area.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS. Global importance. Rare. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action.

Capoeta capoeta (Güldenstädt, 1773) – Transcaucasian barb; Siraz balığı, aptalca
Taxonomy. Recorded from Turkey by Kuru (2004: 12) under the name *Capoeta capoeta capoeta*.
Distribution. Eastern Turkey. Fresh water species. Turkey regions: CD, GD. Endemic to eastern Turkey and southern Caspian Sea watersheds.
Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT, CON, ABS. Local importance. Sensitive to human activities. No keystone species. Probable decline. Medium priority for conservation action.

Capoeta damascina (Valenciennes in Cuvier & Valenciennes, 1842) – Mesopotamian barb; Kara balığı
Taxonomy. Commonly used synonyms: *Scaphiodon fratercula* Heckel, 1843; *Scaphiodon socialis* Heckel, 1843; *Chondrostoma syriacum* Valenciennes in Cuvier & Valenciennes, 1844. *Capoeta umbla* (Heckel, 1843) is questionably a synonym (Coad 1995: 14). Recorded from Turkey by Kuru (2004: 12) under the name *Capoeta capoeta umbla*.
Distribution. Southeastern Turkey. Fresh water species. Turkey regions: MD, OD, QD, GD. Outside the area, Jordan River system, Levant and Mesopotamia.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

**Capoeta ekmekciae* Turan, Kottelat, Kırankaya & Engin, 2006 – Ekmekci barb
Taxonomy. Recently described by Turan et al. (2006b).
Distribution. Çoruh River, northeastern Anatolian Black Sea watersheds. Freshwater species. Turkey region: BD. Endemic to the area.
Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT, CON, ABS. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

**Capoeta kosswigi* Karaman, 1969 – Van barb
Taxonomy. Recorded from Turkey by Kuru (2004: 11) under the name *Capoeta capoeta kosswigi*.
Distribution. Van Gölü. Fresh water and transitional water. Turkey region: VD. Endemic to the area.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON. Global importance. Rare. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action.

**Capoeta pestai* (Pietschmann, 1933) – Egirdir barb; Siraz balığı
Distribution. Eğirdir Gölü. Fresh water species. Turkey region: CL. Endemic to the area.
Conservation. Critically endangered in Turkey (CR). Threats: HAB, EUT, CON, ABS, AQU. Global importance. Rare. Sensitive to human activities. No keystone species. Severe decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive.

Capoeta sieboldii (Steindachner, 1864) – Colchic khramulya
Taxonomy. Frequently used synonym: *Varicorhinus sieboldii*. Recorded from Turkey by Kuru (2004: 12) under the name *Capoeta capoeta sieboldi*.
Distribution. Southern and southeastern Black Sea watersheds. Fresh water species. Turkey region: BD. Outside the area, western Transcaucasia.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

**Capoeta tinca* (Heckel, 1843) – Anatolian khramulya; Kara balığı, siraz balığı
Distribution. Southern and southeastern Black Sea watersheds. Fresh water species. Turkey regions: WL, BD. Endemic to the area.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS. Global importance. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action.

Capoeta trutta (Heckel, 1843) – Trout barb; Kara balığı, lekelisiraz balığı
Distribution. Firat Nehri/Euphrates and Dicle Nehri/Tigris watershed. Fresh water species. Turkey region: GD. Endemic to Euphrates and Tigris river systems.
Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT, CON, ABS. Local importance. Sensitive to human activities. No keystone species. Probable decline. Medium priority for conservation action.

**Carasobarbus chantrei* (Sauvage, 1882) – Antakya barbel; Bıyıkli balığı
Taxonomy. Named *Barbus chantrei* by authors.
Distribution. Asi Nehri/Orontes and Quwayq watersheds. Fresh water species. Turkey regions: OD, QD. Endemic to Asi Nehri/Orontes and Quwayq river systems.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS. Global importance. Rare. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive.

Carasobarbus luteus (Heckel, 1843) – Yellow barbel
Taxonomy. *Barynotus albus* (Heckel, 1843) is a junior synonym according to Ekmekçi & Banarescu (1998: 90). Named *Barbus luteus* by authors.
Distribution. Southeastern Turkey. Fresh water species. Turkey regions: OD, QD, GD. Endemic to Asi Nehri/Orontes, Quwayq, Gulf and Strait of Hormuz river systems.
Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT, CON, ABS. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Carassius auratus (Linnaeus, 1758), golden form – Gold fish and *Carassius auratus* (Linnaeus, 1758), brown form – Giebel carp; Kirmizi havuz balığı
Taxonomy. *Cyprinus gibelio* Bloch, 1782 is a junior synonym for the brown form. Recorded from Turkey by Kuru (2004: 12) and Innal & Erk'akan (2006) under the name *Carassius gibelio*.
Distribution. Brown form: Black Sea watersheds; introduced elsewhere. Golden form: Introduced throughout Turkey (Innal & Erk'akan 2006). Fresh water and transitional water. Turkey regions: EB, WL, BD; (AD, CL, EL, MD, OD, GD, CD). Outside the area, originally central Asia, China and Japan. Introduced throughout the world.
Conservation. Least concern in Turkey (LC). Threats: CON, ABS. Not sensitive to human activities. No keystone species. Stable populations. Low priority for conservation action.

Carassius carassius (Linnaeus, 1758) – Prussian carp; Havuz balığı
Distribution. Widespread in western, northern and eastern Turkey. Fresh water and transitional water. Introduced into Eğirdir Gölü and Beyşehir Gölü (Innal & Erk'akan 2006). Turkey regions: EB, EM, AD, MD, BD, WL, CL. Outside the area, Spain across Europe and north-central Asia to northern China.

Conservation. Least concern in Turkey (LC). Threats: CON, ABS. Not sensitive to human activities. No keystone species. Stable populations. Low priority for conservation action.

**Chondrostoma angorense* Elvira, 1987 – Ankara nase
Taxonomy. Treated as a subspecies of *Chondrostoma nasus* (Linnaeus, 1758) by authors, e. g. Kuru (2004: 12).
Distribution. Sakarya and Kızılırmak river watersheds. Fresh water species. Turkey region: BD. Endemic to the area.
Conservation. Critically endangered in Turkey (CR). Threats: HAB, EUT, CON, ABS. Global importance. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Proposed for Annexes II and IV of the EU Habitats Directive, as a prioritary species.

**Chondrostoma beysehirense* Bogutskaya, 1997 – Beysehir nase
Distribution. Beyşehir Gölü. Fresh water species. Turkey region: CL. Endemic to the area.
Conservation. Critically endangered in Turkey (CR). Threats: HAB, EUT, CON, ABS, AQU. Especially threatened by eutrophication/pollution and introduction of *Sander lucioperca*. Global importance. Sensitive to human activities. No keystone species. Severe decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive.

Chondrostoma colchicum Derjugin (ex Kessler), 1899 – Colchic nase; Kababurun balığı
Distribution. Anatolian Black Sea watersheds. Fresh water species. Turkey region: BD. Outside the area, Armenia, Azerbaijan and Georgia.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

**Chondrostoma holmwoodii* (Boulenger, 1896) – Izmir nase
Taxonomy. Recorded from Turkey by Kuru (2004: 12) under the name *Chondrostoma holmwoodii holmwoodii*.
Distribution. Aegean Sea watersheds, Biga Peninsula and Susurluk River (Sari et al. 2006). Fresh water species. Turkey region: AD. Endemic to the area.
Conservation. Critically endangered in Turkey (CR). Threats: HAB, EUT, CON, ABS. Global importance. Rare. Sensitive to human activities. No keystone species. Severe decline. High priority for conservation action. Listed as vulnerable by IUCN since 1 Aug. 1996 (Baillie et al. 2004). Proposed for Annex II of the EU Habitats Directive.

**Chondrostoma kinzelbachi* Krupp, 1985 – Orontes nase
Distribution. Asi Nehri/Orontes watershed. Fresh water species. Turkey region: OD. Endemic to Orontes River system of Turkey and Syria.
Conservation. Critically endangered in Turkey (CR). Threats: HAB, EUT, CON, ABS. Global importance. Rare. Sensitive to human activities. No keystone species. Severe decline. High priority for conservation action. Proposed for Annexes II and IV of the EU Habitats Directive, as a prioritary species.

**Chondrostoma meandrense* Elvira, 1987 – Menderes nase
Taxonomy. Treated as a subspecies of *Chondrostoma holmwoodii* by authors, e. g. Kuru (2004: 12).
Distribution. Büyük Menderes watershed. Fresh water species. Turkey region: AD. Endemic to the area.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS. Global importance. Rare. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action.

Chondrostoma nasus (Linnaeus, 1758) – Sneep; Kababurun balığı
Distribution. Western and central Turkey. Fresh water species. Turkey regions: EB, EM, AD, BD, WL. Outside the area, Rhine and Danube watersheds in Europe.
Conservation. Vulnerable in Turkey (VU). Extinct in Bafa Gölü (Sari et al. 1999). Threats:

HAB, EUT, CON, ABS. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action. In Appendix III of the Bern Convention (protected fauna).

Chondrostoma oxyrhynchum (Kessler, 1877) – Terek nase
Taxonomy. *Chondrostoma cyri* Kessler, 1877 is a synonym. Recorded from Turkey by Kuru (2004: 12) under the name *Chondrostoma oxyrhynchum cyri*.
Distribution. Kura-Aras River system. Fresh water species. Turkey region: CD. Endemic to Caspian Sea watersheds including Kura-Aras River system.
Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT, CON. Sensitive to human activities. No keystone species. Probable decline. Medium priority for conservation action.

Chondrostoma regium (Heckel, 1843) – King nase
Distribution. Firat Nehri/Euphrates and Dicle Nehri/Tigris watershed. Fresh water species. Turkey region: GD. Endemic to Euphrates and Tigris river systems.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS. Local importance. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive, as a prioritary species.

Chondrostoma vardarense Karaman, 1928 – Vardar nase
Distribution. European Mediterranean Sea watersheds. Fresh water species. Turkey region: EM. Endemic to Mediterranean Sea watersheds of northeastern Greece, Macedonia, Bulgaria, and European parts of Turkey.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON. Rare. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive.

**Crossocheilus caudomaculatus* (Battalgil, 1942) – Antakya minnow; Lekelisaz balığı
Taxonomy. Originally described as *Hemigrammocapoeta caudomaculata*.
Distribution. Endemic to former Amik Gölü, Asi Nehri/Orontes River system. Fresh water species. Turkey region: OD.
Conservation. Globally extinct (EX) due to habitat loss. Threats: HAB, EUT, CON, ABS. Global importance. Very sensitive to human activities. No keystone species.

**Crossocheilus klatti* (Kosswig, 1950) – Isparta minnow; Saz balığı
Distribution. Endemic to Eğirdir Gölü and Gölçük Gölü, Turkey. Fresh water species. Turkey region: CL. Endemic to the area.
Conservation. Critically endangered in Turkey (CR). Threats: HAB, EUT, CON, ABS, AQU. Global importance. Rare. Very sensitive to human activities. No keystone species. Severe decline. High priority for conservation action.

Ctenopharyngodon idella (Valenciennes in Cuvier & Valenciennes, 1844) – Grass carp
Taxonomy. Recorded from Turkey by Kuru (2004: 12) under the name *Ctenopharyngodon idellus*.
Distribution. Introduced into European Mediterranean watersheds, Western Lakes watersheds and Aegean Sea watersheds (Innal & Erk'akan 2006), and into Firat Nehri/Euphrates and Dicle Nehri/Tigris watershed according to Coad (1991: 16). Fresh water and transitional water. Turkey regions: (EM, AD, WL, GD). Outside the area, originally Amur system in East Asia; widely introduced.
Conservation. Not evaluated in Turkey (NE). Not native in Turkey. No conservation action advisable; specimens should be removed from Turkish waters if encountered.

Cyprinion kais Heckel, 1843 – Kais kingfish
Distribution. Firat Nehri/Euphrates and Dicle Nehri/Tigris watershed. Fresh water species. Turkey region: GD. Endemic to Euphrates and Tigris river systems.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS. Sensitive to

human activities. No keystone species. Significant decline. Low priority for conservation action.

Cyprinion macrostomum Heckel, 1843 – Tigris kingfish; Beni balığı
Taxonomy. Recorded from Turkey by Kuru (2004: 12) under the name *Cyprinion macrostomus*.
Distribution. Southeastern Turkey. Fresh water species. Turkey regions: MD, OD, QD, GD. Endemic to eastern Mediterranean, Asi Nehri/Orontes, Quwayq, Euphrates and Tigris river systems.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Cyprinion tenuiradius Heckel, 1847 – Araxes kingfish
Distribution. Eastern Turkey. Fresh water and transitional water. Turkey regions: CD, GD, VD, UD. Endemic to Aras and Kara Agatsch river systems and additional river systems in eastern Turkey.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON. Local importance. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action.

Cyprinus carpio Linnaeus, 1758 – Common carp; Sazan balığı
Distribution. Black Sea watersheds; introduced elsewhere (Innal & Erk'akan 2006). Fresh water and transitional water. Turkey regions: EB, BD; (AD, WL, CL, EL, MD, OD, GD, CD). Outside the area, originally restricted to Black Sea watersheds; widely introduced elsewhere.
Conservation. Least concern in Turkey (LC). Threats: CON, ABS. Not sensitive to human activities. No keystone species. Stable populations. Low priority for conservation action.

Garra rufa (Heckel, 1843) – Red garra; Yağli balığı
Taxonomy. Recorded from Turkey by Kuru (2004: 12) under the name *Garra rufa obtusa*.
Distribution. Southeastern Turkey. Fresh water species. Turkey regions: MD, OD, QD, GD. Endemic to Asi Nehri/Orontes, Quwayq and Tigris-Euphrates river systems and some rivers in southern Turkey.
Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT, CON, ABS. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Garra variabilis (Heckel, 1843) – Variable garra; Yapiskan balığı
Distribution. Southeastern Turkey. Fresh water species. Turkey regions: MD, OD, QD, GD. Endemic to Asi Nehri/Orontes, Quwayq and Tigris-Euphrates river systems and some rivers in southern Turkey.
Conservation. Least concern in Turkey (LC). Threats: HAB, EUT, CON, ABS. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Gobio gobio (Linnaeus, 1758) – Gudgeon; Derekayası balığı
Taxonomy. Recorded from Turkey by Kuru (2004: 12–13) under the names *Gobio gobio gymnostethus* Ladiges, 1960, *G. gobio insuyanus* Ladiges, 1960, *G. gobio intermedius* Battalgil, 1944, and *G. gobio microlepidotus* Battalgil, 1942.
Distribution. Widespread in northwestern and central Turkey. Fresh water species. Turkey regions: EB, EM, AD, WL, CL, BD. Outside the area, British Isles and France east to Volga River system.
Conservation. Least concern in Turkey (LC). Threats: HAB, EUT, CON, ABS. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

**Gobio hettitorum* Ladiges, 1960 – Anatolian gudgeon; Derekasi balığı
Distribution. Gökdere watersheds around Karaman. Fresh water species. Turkey region: CL. Endemic to the area.
Conservation. Critically endangered in Turkey (CR). Threats: HAB, EUT, CON, ABS. Global importance. Rare. Sensitive to human activities. No keystone species. Severe decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive.

**Hemigrammocapoeta kemali* (Hankó, 1925) – Eregli minnow
Distribution. Ereğli/Konya, Gölçük, Eğirdir, Beyşehir, Işıklı Lakes and Köprü Stream/Antalya. Fresh water species. Turkey regions: MD, WL, CL. Endemic to the area.
Conservation. Critically endangered in Turkey (CR). Threats: HAB, EUT, CON, ABS, AQU. Global importance. Rare. Very sensitive to human activities. No keystone species. Severe decline. High priority for conservation action.

Hemigrammocapoeta nana (Heckel, 1843) – Orontes minnow
Taxonomy. Frequently used synonym: *Hemigrammocapoeta sauvagei* (Lortet, 1883). Recorded from Turkey by Kuru (2004: 13) under the name *Hemigrammocapoeta sauvagei*.
Distribution. Some eastern Mediterranean watersheds including Asi Nehri/Orontes. Fresh water and transitional water. Turkey regions: MD, OD. Endemic to Orontes River system, some Turkish Mediterranean rivers, Jordan River system and parts of Israel.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS. Rare. Very sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive.

**Kosswigobarbus kosswigi* (Ladiges, 1960) – Kosswig's barb
Distribution. Endemic to upper reaches of Firat Nehri/Euphrates and Dicle Nehri/Tigris watershed. Fresh water species. Turkey region: GD. Endemic to the area; also marginally in adjacent areas of Iran.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS. Global importance. Rare. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Listed on Annex V of the EU Habitats Directive (under the name *Barbus* spp.). Proposed for Annex II of the EU Habitats Directive.

**Ladigesocypris ghigii* (Gianferrari, 1927) – Rhodes minnow
Taxonomy. Synonym: *Leucaspius irideus* Ladiges, 1960. Recorded from Turkey by Kuru (2004: 13) under the name *Ladigesocypris ghigii ghigii*.
Distribution. Mediterranean watersheds of southwestern Anatolia. Fresh water and transitional water. Turkey regions: AD, MD. Outside the area, Rhodes/Greece.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS. Local importance. Rare. Very sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Listed as vulnerable by IUCN since 1 Aug. 1996 (Baillie et al. 2004). Listed on Annex II of the EU Habitats Directive, as a prioritary species.

**Ladigesocypris mermere* (Ladiges, 1960) – Izmir minnow
Taxonomy. Treated as valid subspecies of *L. ghigii* by Bogutskaya (1996: 42, 1997: 171) and Kuru (2004: 13).
Distribution. Gediz Nehri system into Aegean Sea (erroneously quoted Sea of Marmara in original description). Fresh water and transitional water. Turkey region: AD. Endemic to the area.
Conservation. Critically endangered in Turkey (CR). Threats: HAB, EUT, CON, ABS. Global importance. Rare. Very sensitive to human activities. No keystone species. Severe decline. High priority for conservation action. Listed on Annex II of the EU Habitats Directive, as a prioritary species, under the name *Ladigesocypris ghigii*.

**Leucalburnus satunini* (Berg, 1910) – White Kura bleak
Distribution. Endemic to upper Kura system, Turkey. Fresh water species. Turkey region: CD.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON. Global importance. Rare. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive.

Leucaspius delineatus (Heckel, 1843) – Belica
Distribution. European Black Sea watersheds. Fresh water and transitional water. Turkey region: EB. Outside the area, central Europe to western and northern Black Sea watersheds.
Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT, CON. No keystone species. Decline unknown. Low priority for conservation action. In Appendix III of the Bern Convention (protected fauna).

**Leuciscus anatolicus* Bogutskaya, 1997 – Beysehir dace
Taxonomy. Treated as a valid subspecies of *Leuciscus lepidus* (Heckel, 1843) by Bogutskaya (1997: 173) and Kuru (2004: 13).
Distribution. Beyşehir Gölü. Fresh water species. Turkey region: CL. Endemic to the area.
Conservation. Critically endangered in Turkey (CR). Threats: HAB, EUT, CON, ABS, AQU. Global importance. Rare. Sensitive to human activities. Keystone species. Sensitive to human activities. Severe decline. High priority for conservation action.

Leuciscus cephalus (Linnaeus, 1758) – European chub; Tatlisu kefali balığı
Taxonomy. Commonly used synonyms: *Squalius agdamicus* Kamensky, 1901; *Squalius berak* Heckel, 1843; *Leuciscus cephaloides* Battalgil, 1942.
Distribution. Western, central and northern Turkey. Fresh water and transitional water. Turkey regions: EB, EM, AD, MD, WL, BD, CD, GD. Outside the area, Rhine River system east to Ural, Volga River system, Euphrates-Tigris river systems, and western Iran.
Conservation. Least concern in Turkey (LC). Threats: EUT, CON, ABS. Keystone species. Stable populations. Low priority for conservation action.

Leuciscus idus (Linnaeus, 1758) – Ide
Distribution. European Black Sea watersheds. Fresh water and transitional water. Turkey region: EB. Outside the area, Rhine River system east to western Siberia. Introduced into southern Europe and North America.
Conservation. Data deficient in Turkey (DD). Threats: EUT, CON. Keystone species. Stable populations. Low priority for conservation action.

Leuciscus lepidus (Heckel, 1843) – Tigris dace; Akbalik
Taxonomy. Recorded from Turkey by Kuru (2004: 13) under the name *Leuciscus lepidus lepidus*.
Distribution. Asi Nehri/Orontes, Firat Nehri/Euphrates and Dicle Nehri/Tigris watersheds. Fresh water and transitional water. Turkey regions: (CL), OD, GD. Endemic to Asi Nehri, Quwayq, Euphrates and Tigris river systems.
Conservation. Least concern in Turkey (LC). Threats: HAB, EUT, CON, ABS. Keystone species. Stable populations. Low priority for conservation action.

Leuciscus spurius (Heckel, 1843) – Orontes dace
Distribution. Asi Nehri/Orontes and Quwayq watersheds. Fresh water and transitional water. Turkey regions: OD, QD. Endemic to Orontes and Quwayq river systems of Turkey and Syria.
Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT, CON, ABS. Local importance. Rare. Sensitive to human activities. Keystone species. Significant/regional decline. High priority for conservation action.

Luciobarbus brachycephalus (Kessler, 1872) – Aral barbel

Taxonomy. Named *Barbus brachycephalus* by authors. Record from Aras System doubted by authors but verified by SMNS 25014 from Hasankale Stream, Erzurum Province.

Distribution. Kura-Aras river watersheds. Fresh water species. Turkey region: CD. Endemic to Aral Sea and northern, western and southern Caspian Sea river systems.

Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT, CON. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action. Listed on Annex V of the EU Habitats Directive (as *Barbus* spp.).

Luciobarbus capito (Güldenstädt, 1773) – Bulatamai barbel

Taxonomy. Recorded from Turkey by Kuru (2004: 11) under the name *Barbus capito capito*.

Distribution. Kura-Aras river watersheds. Fresh water species. Turkey region: CD. Endemic to Aral Sea and western and southern Caspian Sea river systems.

Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT, CON. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action. Listed on Annex V of the EU Habitats Directive (as *Barbus* spp.).

Luciobarbus caspius Berg, 1914 – Caspian barbel

Taxonomy. Treated as a valid subspecies of *Barbus brachycephalus* by authors.

Distribution. Kura-Aras river watersheds. Fresh water species. Turkey region: CD. Endemic to southern and western Caspian Sea river systems.

Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT, CON. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action. Listed on Annex V of the EU Habitats Directive (as *Barbus* spp.).

Luciobarbus esocinus Heckel, 1843 – Pike barbel

Taxonomy. *Barbus euphrati* (Sauvage, 1882) is a synonym according to Coad (1995: 12). *Barbus esocinus* (Heckel, 1843) may be a synonym of *Barbus xanthopterus* according to Coad (1995: 12). Named *Barbus esocinus* by authors, e. g. Kuru (2004: 11).

Distribution. Quwayq, Firat Nehri/Euphrates and Dicle Nehri/Tigris watersheds. Fresh water species. Turkey regions: QD, GD. Endemic to Quwayq, Euphrates and Tigris river systems.

Conservation. Least concern in Turkey (LC). Threats: HAB, EUT, CON, ABS. Sensitive to human activities. No keystone species. Stable populations. Low priority for conservation action. Listed on Annex V of the EU Habitats Directive (as *Barbus* spp.).

**Luciobarbus kosswigi* (Karaman, 1971) – Kosswig's barbel

Taxonomy. Originally described as a subspecies of *Barbus plebejus*. Considered as a valid species by Krupp (1985: 22). Questionably treated as a synonym of *Barbus plebejus* (Bonaparte, 1839) by Kottelat (1997: 50). Named *Barbus kosswigi* by authors. Recorded from Turkey by Kuru (2004: 11) under the name *Barbus plebejus kosswigi*.

Distribution. Known only from Hakkari Province, Tigris watershed. Fresh water species. Turkey region: GD. Possibly endemic to the area.

Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT, CON, ABS. Global importance. Sensitive to human activities. No keystone species. Probable decline. High priority for conservation action. Listed on Annex II of the EU Habitats Directive (under the name *Barbus plebejus*).

Luciobarbus mystaceus (Pallas, 1814) – Euphrates barbel; Maya balığı

Taxonomy. Possibly a synonym of *Luciobarbus pectoralis*; treated as a questionable synonym of *Luciobarbus capito* by authors. Recorded from Turkey by Kuru (2004: 11) under the name *Barbus rajanorum mystaceus*.

Distribution. Firat Nehri/Euphrates and Dicle Nehri/Tigris watershed. Fresh water species. Turkey region: GD. Endemic to Euphrates and Tigris river systems.

Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT, CON, ABS. Sensitive to human activities. No keystone species. Probable decline. Medium priority for conservation action. Listed on Annex V of the EU Habitats Directive (as *Barbus* spp.).

**Luciobarbus pectoralis* Heckel, 1843 – Heckel's Orontes barbel

Taxonomy. *Barbus orontis* (Sauvage, 1882) is a synonym according to COAD (1995: 13). *Barbus rajanorum* Heckel, 1843 is a hybrid between *Luciobarbus pectoralis* Heckel, 1843 and *Capoeta damascina* according to COAD (1995: 13). Treated by authors as a valid subspecies of *Luciobarbus capito*. Taxonomy. Recorded from Turkey by KURU (2004: 11) under the name *Barbus capito pectoralis*.

Distribution. Asi Nehri/Orontes and some eastern Mediterranean watersheds. Fresh water species. Turkey regions: MD, OD. Endemic to Orontes River system in Turkey and Syria and some Turkish Mediterranean rivers.

Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS. Global importance. Rare. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Listed on Annex V of the EU Habitats Directive (as *Barbus* spp.).

Luciobarbus xanthopterus (Heckel, 1843) – Yellowfin barbel

Taxonomy. Named *Barbus xanthopterus* by authors, e. g. KURU (2004: 11).

Distribution. Asi Nehri/Orontes, Firat Nehri/Euphrates and Dicle Nehri/Tigris watersheds. Fresh water species. Turkey regions: OD, GD. Endemic to Orontes, Euphrates and Tigris river systems.

Conservation. Endangered in Turkey (EN). Vulnerable in Tigris-Euphrates systems, critically endangered in Orontes system. Threats: HAB, EUT, CON, ABS. Local importance. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Listed on Annex V of the EU Habitats Directive (as *Barbus* spp.). Proposed for Annex II of the EU Habitats Directive.

Petroleuciscus borysthenicus (Kessler, 1859) – Dnjepr chub; Tatlisu kefali balığı

Taxonomy. Taxonomic decision of BOGUTSKAYA (2002: 236). Recorded from Turkey by KURU (2004: 13) under the name *Leuciscus borysthenicus*.

Distribution. Black Sea and Sea of Marmara watersheds. Fresh water and transitional water. Turkey regions: EB, BD, AD. Outside the area, Black Sea watersheds.

Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS. Sensitive to human activities. No keystone species. Probable decline. Medium priority for conservation action. Listed as data deficient by IUCN since 1 Aug. 1996 (BAILLIE et al. 2004).

**Petroleuciscus kurui* (Bogutskaya, 1995) – Tigris chub

Taxonomy. Taxonomic decision of BOGUTSKAYA (2002: 236). Recorded from Turkey by KURU (2004: 13) under the name *Leuciscus kurui*.

Distribution. Upper Dicle Nehri/Tigris watersheds. Fresh water species. Turkey region: GD. Endemic to the area.

Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS. Global importance. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action.

**Petroleuciscus smyrnaeus* (Boulenger, 1896) – Izmir chub

Taxonomy. Taxonomic decision of BOGUTSKAYA (2002: 236). Recorded from Turkey by KURU (2004: 13) under the name *Leuciscus smyrnaeus*.

Distribution. Aegean Sea watersheds. Fresh water and transitional water. Turkey region: AD. Endemic to the area.

Conservation. Critically endangered in Turkey (CR). Threats: HAB, EUT, CON, ABS. Global importance. Sensitive to human activities. No keystone species. Severe decline. High priority for conservation action.

Phoxinellus zeregi Heckel, 1843 – Orontes phoxinellus; Incilevrek balığı

Distribution. Asi Nehri/Orontes and Quwayq watersheds. Fresh water and transitional water. Turkey regions: OD, QD. Endemic to Orontes and Quwayq river systems of Turkey and Syria.

Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS. Global importance. Sensitive to human activities. No keystone species. Significant decline. High

priority for conservation action. Listed as near threatened by IUCN since 1 Aug. 1996 (Baillie & Groombridge 1996).

Phoxinus phoxinus (Linnaeus, 1758) – Eurasian minnow
Distribution. Northwestern Turkey. Fresh water and transitional water. Turkey regions: EB, AD, BD. Outside the area, Eurasia from British Isles and eastern Spain to eastern Siberia.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

**Pseudophoxinus anatolicus* (Hankó, 1925) – Anatolian minnow; Yağ balığı
Distribution. Beyşehir Gölü, Akgöl, and Tuz Gölü; recently immigrated into Çavuşçu Gölü watershed through an irrigation canal from Beyşehir Gölü; a population questionably attributed to this species in Develi Depression (Kızılırmak System) east of Tuz Gölü, possibly immigrated through an irrigation canal established in 1914 (Hrbek et al. 2004: 301, 302). Fresh water and transitional water. Turkey regions: CL, (BD). Endemic to the area.
Conservation. Critically endangered in Turkey (CR). Threats: HAB, EUT, CON, ABS, AQU. Is threatened due to the introduction of other species (Crivelli 1996). Global importance. Rare. Very sensitive to human activities. No keystone species. Severe decline. High priority for conservation action. Listed as endangered by IUCN since 1 Aug. 1996 (Baillie et al. 2004). Proposed for Annexes II and IV of the EU Habitats Directive (as *Pseudophoxinus* spp.).

**Pseudophoxinus antalyae* Bogutskaya, 1992 – Antalya minnow
Distribution. Kirkgöz Stream and Köprü Çayı/Antalya Province. Fresh water species. Turkey region: MD. Endemic to the area.
Conservation. Critically endangered in Turkey (CR). Threats: HAB, EUT, CON, ABS. Global importance. Rare. Very sensitive to human activities. No keystone species. Severe decline. High priority for conservation action. Proposed for Annexes II and IV of the EU Habitats Directive (as *Pseudophoxinus* spp.).

**Pseudophoxinus battalgili* Bogutskaya, 1998 – Beysehir minnow
Distribution. Beyşehir Gölü watersheds. Fresh water species. Turkey region: CL. Endemic to the area.
Conservation. Critically endangered in Turkey (CR). Threats: HAB, EUT, CON, ABS, AQU. Extinct in Beyşehir Gölü, restricted to surrounding watersheds (Hrbek et al. 2004: 300), which are in bad condition. Global importance. Rare. Very sensitive to human activities. No keystone species. Severe decline. High priority for conservation action. Proposed for Annexes II and IV of the EU Habitats Directive (as *Pseudophoxinus* spp.).

**Pseudophoxinus crassus* (Ladiges, 1960) – Tuz minnow
Distribution. Tuz Gölü watershed. Fresh water and transitional water. Turkey region: CL. Endemic to the area. The species is apparently restricted to İnsuyu Creek and the immediate southeastern vicinity (Hrbek et al. 2004: 300).
Conservation. Endangered in Turkey (EN). Listed as data deficient by IUCN since 1 Aug. 1996 (Baillie et al. 2004). Threats: HAB, EUT, CON, ABS. Global importance. Rare. Very sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Proposed for Annexes II and IV of the EU Habitats Directive (as *Pseudophoxinus* spp.).

**Pseudophoxinus egridiri* (Karaman, 1972) – Egirdir minnow
Distribution. Eğirdir Gölü. Fresh water species. Turkey region: CL. Endemic to the area.
Conservation. Critically endangered in Turkey (CR). Critically threatened by introduced species (*Sander lucioperca*); 15 specimens collected in April 2000 (Kai Stölting & Tomas Hrbek, pers. comm., 2001, cited in FishBase, 22 June 2005). Threats: HAB, EUT, CON, ABS, AQU. Global importance. Rare. Very sensitive to human activities. No

keystone species. Severe decline. High priority for conservation action. Listed as critically endangered by IUCN since 1 Aug. 1996 (Baillie et al. 2004). Proposed for Annexes II and IV of the EU Habitats Directive (as *Pseudophoxinus* spp.).

**Pseudophoxinus fahirae* (Ladiges, 1960) – Tefenni minnow; Incilevrek balığı
Distribution. Tirfuna Spring near Tefenni, Burdur Province (said in the original description to belong to Antalya Province); Avlan Gölü; Esen Çayı/Antalya and Muğla provinces. Fresh water species. Turkey region: MD. Endemic to the area.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS. Global importance. Rare. Very sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Listed as vulnerable by IUCN since 1 Aug. 1996 (Baillie et al. 2004). Proposed for Annexes II and IV of the EU Habitats Directive (as *Pseudophoxinus* spp.).

**Pseudophoxinus handlirschi* (Pietschmann, 1933) – Handlirsch's minnow; Kavinne
Distribution. Eğirdir Gölü. Fresh water species. Turkey region: CL. Endemic to the area.
Conservation. Critically endangered in Turkey (CR). Listed as critically endangered by IUCN since 1 Aug. 1996 (Baillie et al. 2004). Threats: HAB, EUT, CON, ABS, AQU. Is threatened due to pollution and the introduction of other species (Crivelli 1996). Global importance. Rare. Very sensitive to human activities. No keystone species. Severe decline. High priority for conservation action. Proposed for Annexes II and IV of the EU Habitats Directive (as *Pseudophoxinus* spp.).

Pseudophoxinus kervillei (Pellegrin, 1911) – Kerville's minnow; Otbalığı
Distribution. Asi Nehri/Orontes and some Mediterranean watersheds. Fresh water and transitional water. Turkey regions: MD, OD. Endemic to Orontes River system, some Mediterranean watersheds of Turkey, Litani, northern and central Jordan River system/Israel.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS, AQU. Local importance. Rare. Very sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Proposed for Annexes II and IV of the EU Habitats Directive (as *Pseudophoxinus* spp.).

**Pseudophoxinus maeandri* (Ladiges, 1960) – Menderes brook minnow; Otbalığı
Taxonomy. *Pseudophoxinus maeandricus* (Ladiges, 1960) is a synonym; Karaman (1972: 124), as the first revising author, chose *P. maeandri* as the valid name. Recorded from Turkey by Kuru (2004: 13) under the names *Pseudophoxinus maeandri* and *P. maeandricus*.
Distribution. Büyük Menderes Nehri watershed; a population questionably assigned to this species in Salda Gölü and Burdur Gölü area (Hrbek et al. 2004: 301). Fresh water and transitional water. Turkey regions: AD, CL. Endemic to the area.
Conservation. Endangered in Turkey (EN). Listed as near threatened by IUCN since 1 Aug. 1996 (Baillie et al. 2004). Threats: HAB, EUT, CON, ABS, AQU. Global importance. Very sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Proposed for Annexes II and IV of the EU Habitats Directive (as *Pseudophoxinus* spp.).

**Pseudophoxinus* sp. – Gögdeli brook minnow
Taxonomy. Undescribed species according to Hrbek et al. (2004: 299, 301).
Distribution. Gögdeli hot springs, Tohma Çayı, Firat Nehri system. Fresh water species. Turkey region: GD. Endemic to the area (Hrbek et al. 2004: 301).
Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT, CON, AQU, ABS. Very sensitive to human activities. No keystone species. Global importance. Decline unknown. High priority for conservation action. Proposed for Annexes II and IV of the EU Habitats Directive (as *Pseudophoxinus* spp.).

Rhodeus amarus (Bloch, 1782) – European bitterling; Acibalik
Taxonomy. This species has been confused with *Rhodeus sericeus* (Pallas, 1772) by authors. Recorded from Turkey by Kuru (2004: 13) under the name *Rhodeus sericeus amarus*.

Distribution. Northwestern Turkey. Fresh water and transitional water. Turkey regions: EB, AD, BD. Outside the area, Europe from Rhône watershed/France to the Neva River system/Russia.

Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT, CON, HOS, ABS. Rare. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action. Listed on Annex II of the EU Habitats Directive (under the name *Rhodeus sericeus amarus*).

Pseudorasbora parva (Temminck & Schlegel, 1842) – Stone moroko

Taxonomy. Recorded from Turkey by Kuru (2004: 13).

Distribution. Introduced into European Mediterranean Sea watersheds and Anatolian Mediterranean Sea watersheds (Innal & Erk'akan 2006). Fresh water species. Turkey regions: (EM; MD). Outside the area, originally southern and central Japan, Taiwan, Korea, China and Amur River system. Introduced into various areas in Europe and Asia.

Conservation. Not evaluated in Turkey (NE). Not native in Turkey. No conservation action advisable; specimens should be removed from Turkish waters if encountered.

Romanogobio persus (Günther, 1899) – Kura gudgeon; Derekayası balığı

Taxonomy. Named *Gobio persus* by authors. Recorded from Turkey by Kuru (2004: 13) under the name *Gobio persa*.

Distribution. Kura-Aras watersheds. Fresh water species. Turkey region: CD. Endemic to Kura-Aras river system.

Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT, CON. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Rutilus frisii (Nordmann, 1840) – Kutum; Levkit balığı

Taxonomy. Synonyms: *Rutilus frisii velecensis* Chichkoff, 1932. Recorded from Turkey by Kuru (2004: 14) under the name *Rutilus frisii frisii*.

Distribution. Black Sea watersheds. Fresh water and transitional water. Turkey regions: EB, WL, BD. Endemic to Black Sea watersheds.

Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action. Listed on Appendix III of the Bern Convention (protected fauna).

Rutilus heckelii (Nordmann, 1840) – Black Sea roach

Taxonomy. Treated as a valid subspecies of *Rutilus rutilus* (Linnaeus, 1758) by Bogutskaya (1997: 179).

Distribution. Anatolian Black Sea watersheds. Fresh water and transitional water. Turkey regions: WL, BD. Endemic to Black Sea watersheds.

Conservation. Vulnerable in Turkey (VU). Threats: EUT, CON, ABS. Sensitive to human activities. Keystone species. Decline unknown. Low priority for conservation action.

Rutilus kutum (Kamensky, 1901) – Caspian kutum

Taxonomy. Synonym: *Leuciscus frisii caspius* Lönnberg, 1900. Treated as a valid subspecies of *Rutilus frisii* by Bogutskaya (1997: 78). Recorded from Turkey by Kuru (2004: 14) under the name *Rutilus frisii caspius*. Synonymised with *Rutilus kutum* by Bogutskaya & Iliadou (2006: 294).

Distribution. Caspian Sea watersheds. Fresh water and transitional water (fresh water only in Turkey). Turkey region: CD. Endemic to Caspian Sea watersheds.

Conservation. Extinct in Turkey (RE). Threats: HAB, EUT, CON, ABS. Extinct in Turkey due to dams/weirs in lower Kura-Aras system which prevent upstream migration. Sensitive to human activities. No keystone species. Decline to extinction. High priority for conservation action. Listed on Appendix III of the Bern Convention (protected fauna) under the name *Rutilus frisii*.

Rutilus rutilus (Linnaeus, 1758) – Roach; Kizilgöz balığı

Taxonomy. Commonly used synonyms: *Leuciscus rutilus caspicus* Yakowlew, 1873; *Leuciscus rutilus fluviatilis* Yakowlew, 1873.

Distribution. European Black Sea watersheds. Fresh water and transitional water. Turkey

region: EB. Outside the area, England and France east to North Sea and Baltic Sea watersheds.
Conservation. Least concern in Turkey (LC). Threats: CON. Not sensitive to human activities. Keystone species. Stable populations. Low priority for conservation action.

Rutilus sojuchbulagi Abdurakhmanov, 1950 – Caspian roach
Distribution. Kura-Aras watersheds. Fresh water and transitional water (fresh water only in Turkey). Turkey region: CD. Endemic to Caspian Sea watersheds.
Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT, CON. Sensitivity to human activities unknown. Keystone species. Probable decline. Medium priority for conservation action.

**Scardinius elmaliensis* Bogutskaya, 1997 – Antalya rudd
Taxonomy. Treated as valid subspecies of *Scardinius erythrophthalmus* (Linnaeus, 1758) by Bogutskaya (1997) and Kuru (2004: 14).
Distribution. Kara Gölü, near Elmalı, Antalya Province. Fresh water species. Turkey region: WL. Endemic to the area.
Conservation. Critically endangered (CR). Threats: HAB, EUT, CON, ABS. Global importance. Sensitive to human activities. Keystone species. Severe decline. The main habitat, Kara Gölü, was drained in the 1950s and converted into agricultural area. Another lake in the area, Avlan Gölü, does no longer exist either; the species may be marginally surviving in a small nearby lake habitat, or may already be extinct. High priority for conservation action.

Scardinius erythrophthalmus (Linnaeus, 1758) – Rudd; Kizilkanat balığı
Taxonomy. Named *Scardinius scardafa* (non Bonaparte, 1837) by authors. Recorded from Turkey by Kuru (2004: 14) under the name *Scardinius erythrophthalmus scardafa*.
Distribution. European Black Sea watersheds. Introduced into Uluabat Gölü/Western Lakes watersheds. Fresh water and transitional water. Turkey regions: EB, (WL). Outside the area, Europe and Asia from British Isles and France east to Aral Sea watershed.
Conservation. Near threatened in Turkey (NT). Threats: HAB, EUT, CON. Sensitive to human activities. Keystone species. Decline unknown. Low priority for conservation action.

**Schizothorax prophylax* Pietschmann, 1933 – Egirdir marinka
Distribution. Eğirdir Gölü. Fresh water species. Turkey region: CL. Endemic to the area.
Conservation. Critically endangered in Turkey (CR). Threats: HAB, EUT, CON, ABS, AQU. Global importance. Rare. Sensitive to human activities. No keystone species. Severe decline. High priority for conservation action.

Tinca tinca (Linnaeus, 1758) – Tench; Kadife balığı
Distribution. European Black Sea watersheds. Introduced into central Anatolian lakes (Innal & Erk'akan 2006). Fresh water and transitional water. Turkey regions: EB, WL, (CL). Outside the area, Eurasia from British Isles and France east to Lake Baikal/Russia.
Conservation. Least concern in Turkey (LC). Threats: CON. Not sensitive to human activities. No keystone species. Stable populations. Low priority for conservation action.

Vimba melanops (Heckel, 1837) – Macedonian vimba
Distribution. European Mediterranean Sea watersheds. Fresh water and transitional water. Turkey region: EM. Endemic to northwestern Greece and northwestern Turkey.
Conservation. Data deficient in Turkey (DD). Listed as vulnerable by IUCN since 1 Aug. 1996 (Baillie et al. 2004). Threats: HAB, EUT, CON. Local importance. Rare. Sensitive to human activities. No keystone species. Probable decline. High priority for conservation action.

Vimba vimba (Linnaeus, 1758) – Baltic vimba; Egrez balığı
Taxonomy. Recorded from Turkey by Kuru (2004: 14) under the name *Vimba vimba tenella* (Nordmann, 1840).
Distribution. European Black Sea watersheds. Fresh water and transitional water. Turkey

regions: EB, WL. Outside the area, Rhine River system and Baltic Sea watersheds east to Caspian Sea watersheds.
Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT, CON. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Cobitidae – Spined loaches

**Cobitis bilseli* Battalgil, 1942 – Beysehir spined loach; Kocatasyiyen balığı
Taxonomy. Recorded from Turkey by Kuru (2004: 14) under the name *Cobitis (Beysheria) bilseli*.
Distribution. Beyşehir Gölü. Fresh water species. Turkey region: CL. Endemic to the area.
Conservation. Critically endangered in Turkey (CR). Threats: HAB, EUT, CON, ABS, AQU. Global importance. Rare. Sensitive to human activities. No keystone species. Severe decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive.

Cobitis elazigensis Coad & Sarieyyüpoglu, 1988 – Tigris spined loach; Tasyiyen balığı
Distribution. Middle reaches of Firat Nehri/Euphrates and Dicle Nehri/Tigris watershed. Fresh water species. Turkey region: GD. Endemic to Euphrates and Tigris river systems.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS. Local importance. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive.

**Cobitis fahirae* Erkakan, Atalay-Ekmekçi & Nalbant, 1998 – Küçük Menderes spined loach; Tasyiyen balığı
Taxonomy. Named *Cobotis fahireae* by Erkakan et al. (1999: 16).
Distribution. Küçük Menderes Nehri, Gediz Nehri watersheds and Biga peninsula (northwestern Anatolia). Fresh water and transitional water. Turkey regions: AD, WL. Endemic to the area.
Conservation. Critically endangered in Turkey (CR). Threats: HAB, EUT, CON, ABS. Global importance. Rare. Sensitive to human activities. No keystone species. Severe decline. High priority for conservation action.

**Cobitis kellei* Erkakan, Atalay-Ekmekçi & Nalbant, 1998 – Göksü spined loach; Tasyiyen balığı
Distribution. Göksü watershed (into Dicle Nehri/Tigris). Fresh water species. Turkey region: GD. Endemic to the area.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS. Global importance. Rare. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive.

**Cobitis kurui* Erkakan, Atalay-Ekmekçi & Nalbant, 1998 – Kuru's spined loach; Tasyiyen balığı
Taxonomy. Treated as a valid subspecies of *Cobitis vardarensis* Karaman, 1928 by Erkakan et al. (1999: 14).
Distribution. Büyük Menderes Nehri watershed and Yuvarlakçay (Köyceğiz/Muğla) (Balik et al. 2005). Fresh water and transitional water. Turkey region: AD. Endemic to the area.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS. Global importance. Rare. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action.

Cobitis levantina Krupp & Moubayed, 1992 – Syrian spined loach
Taxonomy. Recorded from Turkey by Kuru (2004: 14) under the name *Cobitis (Bicanestrinia) leventina*.

Distribution. Asi Nehri/Orontes watershed. Fresh water and transitional water. Turkey region: OD. Endemic to Orontes river system in Syria and Turkey.
Conservation. Critically endangered in Turkey (CR). Threats: HAB, EUT, CON, ABS. Local importance. Rare. Sensitive to human activities. No keystone species. Severe decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive.

**Cobitis phrygica* Battalgazi, 1944 – Aci spined loach
Taxonomy. Treated as valid by Coad & Sarieyyüpoglu (1988: 429); treated provisionally as a synonym of *Cobitis simplicispina* Hankó 1925 (Erkakan et al. 1999: 24).
Distribution. Aci Göl watershed. Fresh water and transitional water. Turkey region: CL. Endemic to the area.
Conservation. Critically endangered in Turkey (CR). Threats: HAB, EUT, CON, ABS. Global importance. Rare. Sensitive to human activities. No keystone species. Severe decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive.

**Cobitis puncticulata* Erkakan, Atalay-Ekmekçi & Nalbant, 1998 – Spotted spined loach; Tasyiyen balığı
Taxonomy. Recorded from Turkey by Kuru (2004: 14) under the name *Cobitis (Bicanestrinia) puncticulata*.
Distribution. Manyas Gölü. Fresh water species. Turkey region: WL. Endemic to the area.
Conservation. Critically endangered in Turkey (CR). Threats: HAB, EUT, CON. Global importance. Rare. Sensitive to human activities. No keystone species. Severe decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive.

**Cobitis simplicispina* Hankó, 1925 – Sakarya spined loach; Tasyiyen balığı
Distribution. Sakarya Nehri watershed. Fresh water species. Turkey region: BD. Endemic to the area.
Conservation. Critically endangered in Turkey (CR). Threats: HAB, EUT, CON, ABS. Global importance. Rare. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Proposed for Annexes II and IV of the EU Habitats Directive, as a prioritary species.

**Cobitis splendens* Erkakan, Atalay-Ekmekçi & Nalbant, 1998 – Splendid spined loach; Tasyiyen balığı
Distribution. Black Sea coastal watersheds southwest of Ereğli. Fresh water species. Turkey region: BD. Endemic to the area.
Conservation. Critically endangered in Turkey (CR). Threats: HAB, EUT, CON, ABS. Global importance. Rare. Sensitive to human activities. No keystone species. Severe decline. High priority for conservation action.

Cobitis strumicae Karaman, 1955 – Bulgarian spined loach
Distribution. European watersheds of Turkey. Fresh water and transitional water. Turkey regions: EB, EM. Outside the area, northeastern Greece and Bulgaria.
Conservation. Endangered in Turkey (EN). Listed as data deficient by IUCN since 1 Aug. 1996 (Baillie et al. 2004). Threats: HAB, EUT, CON, ABS. Is threatened due to pollution and habitat destruction (Crivelli 1996). Sensitive to human activities. No keystone species. Significant decline. Medium priority for conservation action.

Cobitis turcica Hankó, 1925 – Turkish spined loach; Tasyiyen balığı
Taxonomy. Recorded from Turkey by Kuru (2004: 14) under the name *Cobitis (Bicanestrinia) turcica.*
Distribution. Lake watersheds in central and eastern Anatolia. Fresh water species. Turkey regions: CL, EL. Endemic to central and eastern Anatolia/Turkey and Tor River system/Iran.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS. Local im-

portance. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive.

Cobitis vardarensis Karaman, 1928 – Vardar spined loach
Distribution. European Mediterranean Sea watersheds, and Lake İznik (record by Özuluğ et al. 2005: 373). Fresh water and transitional water. Turkey regions: EM, WL. Outside the area, Macedonia and northeastern Greece.
Conservation. Endangered in Turkey (EN). Listed as data deficient by IUCN since 1 Aug. 1996 (Baillie et al. 2004). Threats: HAB, EUT, CON, ABS. Is threatened due to water abstraction and pollution (Crivelli 1996). Sensitive to human activities. No keystone species. Significant decline. Medium priority for conservation action.

Misgurnus fossilis (Linnaeus, 1758) – Weatherfish
Distribution. European Black Sea watersheds. Fresh water and transitional water. Turkey region: EB. Outside the area, Eurasia from France to Russia.
Conservation. Endangered in Turkey (EN). Listed as near threatened by IUCN since 1 Aug. 1996 (Baillie et al. 2004). Threats: HAB, EUT, CON. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action. Listed on Appendix I of the Bern Convention (protected fauna). Listed on Annex II of the EU Habitats Directive.

Sabanejewia balcanica (Karaman, 1922) – Balcan spined loach
Taxonomy. Treated as a subspecies of *Sabanejewia aurata* (Filippi, 1863) by authors.
Distribution. European Black Sea watersheds. Fresh water and transitional water. Turkey region: EB. Endemic to northwestern and northern Black Sea watersheds.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Sabanejewia caspia (Eichwald, 1838) – Caspian spined loach
Distribution. Kura-Aras river watersheds. Fresh water and transitional water (fresh water only in Turkey). Turkey region: CD. Outside the area, Caspian Sea watersheds.
Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT, CON. Sensitive to human activities. No keystone species. Probable decline. Medium priority for conservation action.

Balitoridae – Stone loaches

Barbatula barbatula (Linnaeus, 1758) – Stone loach
Distribution. Black Sea watersheds. Fresh water and transitional water. Turkey regions: EB, BD. Outside the area, Eurasia from England and France east to China. Introduced into Ireland.
Conservation. Least concern in Turkey (LC). Threats: EUT, CON, ABS. Not sensitive to human activities. No keystone species. Stable populations. Low priority for conservation action.

Barbatula bureschi (Drenski, 1928) – Bulgarian stone loach
Taxonomy. Recorded from Turkey by Kuru (2004: 15) under the name *Orthrias brandti bureschi.*
Distribution. Black Sea watersheds. Fresh water and transitional water. Turkey region: EB. Endemic to Bulgaria and northwestern Turkey.
Conservation. Data deficient in Turkey (DD). Listed as data deficient by IUCN since 1 Aug. 1996 (Baillie et al. 2004). Threats: EUT, CON. Local importance. Not sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Barbatula pulsiz (Krupp, 1992) – Van stone loach

Distribution. Van Gölü watersheds. Fresh water and transitional water. Turkey region: VD. Endemic to the area.

Conservation. Data deficient in Turkey (DD). Listed as data deficient by IUCN since 1 Aug. 1996 (Baillie et al. 2004). Threats: HAB, EUT, CON. Global importance. Rare. Not sensitive to human activities. No keystone species. Decline unknown. Medium priority for conservation action.

Nemacheilus angorae Steindachner, 1897 – Angora loach; Çamur balığı

Taxonomy. Recorded from Turkey by Kuru (2004: 15) under the name *Orthrias angorae angorae*. *Orthrias angorae eregliensis* Banarescu & Nalbant, 1978 [recorded by Kuru (2004: 15)] is a synonym.

Distribution. Widespread in Anatolia. Fresh water and transitional water. Turkey regions: AD, MD, BD, WL, CL, EL, OD, GD, VD. Outside the area, widespread in Anatolia and Middle East.

Conservation. Least concern in Turkey (LC). Listed as data deficient by IUCN since 1 Aug. 1996 (Baillie et al. 2004). Threats: EUT, CON, ABS. Not sensitive to human activities. No keystone species. Stable populations. Low priority for conservation action.

**Nemacheilus insignis* (Heckel, 1843) – Syrian loach

Distribution. Quwayq watershed. **New record** from Turkey based on SMNS 25133 from Sünnep Deresı/Kilis. Fresh water species. Turkey region: QD. Endemic to Syria, Dead Sea watersheds and Quwayq watershed.

Conservation. Critically endangered in Turkey (CR). Threats: HAB, EUT, CON, ABS. Global importance. Rare. Sensitive to human activities. No keystone species. Severe decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive, as a prioritary species.

**Orthrias araxensis* Banarescu & Nalbant, 1978 – Aras loach

Taxonomy. Recorded from Turkey by Kuru (2004: 15) under the name *Orthrias angorae araxensis*.

Distribution. Upper Aras Nehri watershed. Fresh water species. Turkey region: CD. Endemic to the area.

Conservation. Vulnerable in Turkey (VU). Threats: EUT, CON. Global importance. Rare. Sensitive to human activities. No keystone species. Probable decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive.

Orthrias brandtii (Kessler, 1877) – Kura loach

Taxonomy. Recorded from Turkey by Kuru (2004: 15) under the name *Orthrias brandti brandti*.

Distribution. Kura Nehri watershed. Fresh water species. Turkey region: CD. Endemic to Kura Nehri system.

Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON. Local importance. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action.

**Orthrias cyri* (Berg, 1910) – Göle loach

Taxonomy. Treated as a valid subspecies of *Nemacheilus tigris* (Heckel, 1843) by Coad (1995: 23).

Distribution. Göle Depression and its tributaries, upper Kura Nehri watershed. Fresh water species. Turkey region: CD. Endemic to the area.

Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON. Global importance. Rare. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive.

**Orthrias euphraticus* (Banarescu & Nalbant, 1964) – Batman loach

Taxonomy. Recorded from Turkey by Kuru (2004: 15) under the name *Orthrias insignis euphratica*.

Distribution. Upper Dicle Nehri/Tigris watershed. Fresh water species. Turkey region: GD. Endemic to the area.
Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT, CON, ABS. Global importance. Rare. Sensitive to human activities. No keystone species. Probable decline. High priority for conservation action.

Orthrias frenatus (Heckel, 1843) – Banded Tigris loach
Taxonomy. Named *Nemacheilus frenatus* by authors. Recorded from Turkey by Kuru (2004: 14) under the name *Noemacheilus frenatus*.
Distribution. Firat Nehri/Euphrates and Dicle Nehri/Tigris watershed. Fresh water species. Turkey region: GD. Endemic to Euphrates and Tigris river systems.
Conservation. Near threatened in Turkey (NT). Threats: HAB, EUT, CON, ABS. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Orthrias panthera (Heckel, 1843) – Tiger loach; Çöpçü balığı
Taxonomy. Synonyms: *Orthrias brandti samantica* Banarescu & Nalbant, 1978; *Orthrias brandti simavica* Balik & Banarescu, 1978; recorded under these names by Kuru (2004: 15).
Distribution. Black Sea, Mediterranean, Asi Nehri/Orontes, Firat Nehri/Euphrates and Dicle Nehri/Tigris watersheds. Fresh water and transitional water. Turkey regions: MD, BD, OD, GD. Endemic to Turkey and adjacent southeastern watersheds of Syria, Iraq and Iran.
Conservation. Near threatened in Turkey (NT). Threats: HAB, EUT, CON, ABS. Local importance. Sensitive to human activities. No keystone species. Significant/regional decline. Medium priority for conservation action.

Orthrias tigris (Heckel, 1843) – Tigris loach; Çöpçü balığı
Taxonomy. *Cobitis argyrogramma* Heckel, 1849 is a junior synonym according to Coad (1995: 23). Recorded from Turkey by Kuru (2004: 14, 15) under the names *Noemacheilus argyrogramma* and *Noemacheilus tigris*.
Distribution. Firat Nehri/Euphrates and Dicle Nehri/Tigris watershed and some Mediterranean Sea watersheds. Fresh water and transitional water. Turkey regions: MD, GD. Endemic to southeastern Turkey and adjacent watersheds of Euphrates and Tigris.
Conservation. Near threatened in Turkey (NT). Threats: HAB, EUT, CON, ABS. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

**Orthrias tschaiyssuensis* (Banarescu & Nalbant, 1964) – Gaziantep loach; Çöpçü balığı
Distribution. Formerly endemic to Çayı Su, Firat Nehri/Euphrates system, Gaziantep area. Fresh water species. Turkey region: GD.
Conservation. Globally extinct (EX). Listed as vulnerable by IUCN since 1 Aug. 1996 (Baillie et al. 2004). Threats: HAB, EUT, CON, ABS. Global importance. Sensitive to human activities. No keystone species. High priority for conservation action if a surviving population should be detected.

Paracobitis malapterura (Valenciennes in Cuvier & Valenciennes, 1846) – Western crested loach
Taxonomy. Named *Paracobitis malapterurus* by authors. Recorded from Turkey by Kuru (2004: 15) under the name *Noemacheilus malapterurus*.
Distribution. Firat Nehri/Euphrates and Dicle Nehri/Tigris watershed. Fresh water species. Turkey region: GD. Endemic to Euphrates and Tigris river systems.
Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT, CON, ABS. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

**Schistura chrysicristinae* Nalbant, 1998 – Batman crested loach
Distribution. Batman River, upper Dicle Nehri/Tigris watershed. Fresh water species. Turkey region: GD. Endemic to the area.

Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT, CON. Global importance. Rare. Sensitive to human activities. No keystone species. Probable decline. High priority for conservation action.

**Seminemacheilus lendli* (Hankó, 1925) – Anatolian loach; Çöpçü balığı
Taxonomy. Recorded from Turkey by Kuru (2004: 14) under the name *Noemacheilus lendli*.
Distribution. Anatolian Black Sea watersheds and central Anatolian lake watersheds. Fresh water species. Turkey regions: BD, CL. Endemic to the area.
Conservation. Critically endangered in Turkey (CR). Listed as data deficient by IUCN since 1 Aug. 1996 (Baillie et al. 2004). Threats: HAB, EUT, CON, ABS. Global importance. Sensitive to human activities. No keystone species. Severe decline. High priority for conservation action.

**Turkinoemacheilus kosswigi* Banarescu & Nalbant, 1964 – Kosswig's loach; Çöpçü balığı
Distribution. Upper Firat Nehri/Euphrates and Dicle Nehri/Tigris watershed. Fresh water species. Turkey region: GD. Endemic to the area.
Conservation. Data deficient in Turkey (DD). Listed as data deficient by IUCN since 1 Aug. 1996 (Baillie et al. 2004). Threats: HAB, EUT, CON, ABS. Global importance. Sensitive to human activities. No keystone species. Significant/regional decline. High priority for conservation action.

Sisoridae – Sisorid catfishes

Glyptothorax armeniacus (Berg, 1918) – Armenian mountain cat; Iğneliküçükyayin balığı
Taxonomy. Recorded from Turkey by Kuru (2004: 15) under the name *Glyptothorax* sp.
Distribution. Eastern and southeastern Turkey. Fresh water species. Turkey regions: BD, CD, GD. Endemic to eastern and southeastern Turkey and adjacent areas.
Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT, CON, ABS. Local importance. Sensitive to human activities. No keystone species. Significant/regional decline. Medium priority for conservation action.

Glyptothorax cous (Linné, 1766) – Tigris cat
Distribution. Firat Nehri/Euphrates and Dicle Nehri/Tigris watershed. Fresh water and transitional water (fresh water only in Turkey). Turkey region: GD. Endemic to Euphrates and Tigris river systems.
Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT, CON, ABS. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Glyptothorax kurdistanicus (Berg, 1931) – Iran cat; Vantuz luyayin balığı
Taxonomy. Recorded from Turkey by Kuru (2004: 15) under the name *Glyptothorax* sp.
Distribution. Eastern Turkey. Fresh water species. Turkey regions: GD, UD. Endemic to eastern Turkey and western Iran.
Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT, CON. Local importance. Sensitive to human activities. No keystone species. Significant/regional decline. Medium priority for conservation action.

Glyptothorax steindachneri (Pietschmann, 1913) – Steindachner's cat
Distribution. Upper Firat Nehri/Euphrates and Dicle Nehri/Tigris watershed. Fresh water species. Turkey region: GD. Endemic to upper Euphrates and Tigris river systems.
Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT, CON, ABS. Local importance. Sensitive to human activities. No keystone species. Significant/regional decline. Medium priority for conservation action.

Siluridae – Catfishes

Silurus glanis Linnaeus, 1758 – Wels catfish; Yayin balığı

Distribution. Black Sea watersheds. Introduced into several reservoirs and dam lakes throughout Turkey (Innal & Erk'akan 2006). Fresh water and transitional water. Turkey regions: EB, BD, AD, WL. Outside the area, Eurasia from Germany to Russia. Introduced into several other Eurasian areas, including United Kingdom, France, Spain, Italy, North Africa and China.

Conservation. Vulnerable in Turkey (VU). Extinct in Bafa Gölü (Sari et al. 1999). Threats: FIT, EUT, CON. Sensitive to human activities. No keystone species. Probable decline. Medium priority for conservation action. In Appendix III of the Bern Convention (protected fauna).

Silurus triostegus Heckel, 1843 – Tigris catfish

Taxonomy. Treated as valid by Coad (1995: 24), but may be a synonym of *Silurus glanis* Linnaeus, 1758 according to Coad & Holcik (2000: 139). Recorded from Turkey by Kuru (2004: 15) under the name *Silurus (Parasilurus) triostegus*.

Distribution. Quwayq, Firat Nehri/Euphrates and Dicle Nehri/Tigris watersheds. Fresh water and transitional water (fresh water only in Turkey). Turkey regions: QD, GD. Endemic to Quwayq, Euphrates and Tigris river systems.

Conservation. Data deficient in Turkey (DD). Threats: FIT, HAB, EUT, CON, ABS. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Clariidae – Airbreathing catfishes

Clarias gariepinus (Burchell, 1822) – North African catfish; Karayayin balığı

Taxonomy. Commonly used synonyms: *Clarias lazera* Valenciennes in Cuvier & Valenciennes, 1840; *Clarias syriacus* Valenciennes in Cuvier & Valenciennes, 1840. Recorded from Turkey by Kuru (2004: 15) under the names *Clarias gariepinus* and *C. lazera*.

Distribution. Introduced into southern Turkey (Innal & Erk'akan 2006). Fresh water and transitional water. Turkey regions: (BD; MD, OD). Outside the area, originally distributed in North Africa and some areas of the Middle East.

Conservation. Not evaluated in Turkey (NE). Not native in Turkey. No conservation action advisable.

Ariidae – Sea catfishes

Arius cous Hyrtl, 1859 – Tigris barbelled catfish

Distribution. Quwayq, Firat Nehri/Euphrates and Dicle Nehri/Tigris watersheds. Fresh water and transitional water (fresh water only in Turkey). Turkey regions: QD, GD. Endemic to Quwayq, Euphrates and Tigris river systems.

Conservation. Data deficient in Turkey (DD). Extinct in Quwayq watershed. Threats: FIT, HAB, EUT, CON, ABS. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Bagridae – Bagrid catfishes

Mystus pelusius (Solander in Russell, 1794) – Tigris mystus

Taxonomy. Synonyms: *Bagrus halepensis* Valenciennes in Cuvier & Valenciennes, 1840; *Macrones colvillii* Günther, 1874; *Macrones pelusius*.

Taxonomy. Recorded from Turkey by Kuru (2004: 15) under the names *Mystus colvillii* and *M. halepensis*.

Distribution. Middle reaches of Firat Nehri/Euphrates and Dicle Nehri/Tigris watershed. Fresh water and transitional water (fresh water only in Turkey). Turkey region: GD. Endemic to middle and lower Euphrates and Tigris river systems.

Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT, CON, ABS. Sensitive

to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Argentinidae – Argentines

Argentina sphyraena Linnaeus, 1758 – Argentine; Derinsu gümüş balığı
Distribution. Sea of Marmara, Aegean and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic Ocean from Norway south to Western Sahara.
Conservation. Data deficient in Turkey (DD). Threats: FIB, EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Glossanodon leioglossus (Valenciennes in Cuvier & Valenciennes, 1848) – Smalltoothed argentine
Distribution. Aegean Sea; probably also in Mediterranean Sea (data deficient). Marine species. Turkey region: AS. Outside the area, Mediterranean Sea and eastern Atlantic Ocean from southern Spain to Mauritania.
Conservation. Data deficient in Turkey (DD). Threats: FIB, EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Microstomatidae – Slender argentines

Microstoma microstoma (Risso, 1810) – Slender argentine
Distribution. Aegean Sea; probably also in Mediterranean Sea (data deficient). Marine species. Turkey region: AS. Outside the area, Mediterranean Sea; eastern Atlantic Ocean from southern Ireland to Madeira; Gulf of Mexico; Australia and New Zealand.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Nansenia oblita (Facciolà, 1887) – Shining argentine
Distribution. Aegean Sea; probably also in Mediterranean Sea (data deficient). Marine species. Turkey region: AS. Outside the area, Mediterranean Sea and eastern Atlantic Ocean from southern Ireland south to Western Sahara.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Salmonidae – Salmons and trouts

Salmo caspius Kessler, 1877 – Caspian trout; Hazar alası
Taxonomy. Treated as a valid subspecies of *Salmo trutta* Linnaeus, 1758 by Dorofeeva & Savvaitova (1998: 36).
Distribution. Kura-Aras river watersheds. Fresh water, transitional water and marine (fresh water only in Turkey). Turkey region: CD. Endemic to Caspian Sea watersheds.
Conservation. Critically endangered in Turkey (CR). Threats: FIT, HAB, EUT, CON, AQU. Sensitive to human activities. No keystone species. Severe decline. Medium priority for conservation action.

Salmo labrax Pallas, 1814 – Black Sea salmon; Alabalik, Denizalasi
Taxonomy. Treated as a valid subspecies of *Salmo trutta* Linnaeus, 1758 by authors. *Salmo abanticus* Tortonese, 1954 is a synonym according to Bardakci et al. (2006: 52). The species was recorded from Turkey under the names *Salmo trutta abanticus* and *Salmo trutta labrax* by Kuru (2004: 10).
Distribution. Black Sea and adjacent watersheds. Native but also introduced into Eu-

phrates-Tigris watersheds (Coad 1991: 20, as *Salmo trutta*). Fresh water, transitional water and marine. Turkey regions: BS; EB, BD, GD. Endemic to the Black Sea and adjacent watersheds.

Conservation. Endangered in Turkey (EN). Threats: FIT, HAB, EUT, CON, AQU, ABS. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

**Salmo platycephalus* Behnke, 1968 – Flathead trout; Zamantı alası

Taxonomy. Taxonomical revision needed; subgeneric classification was found unjustifiable, genetic analyses performed positioned the species within Adriatic phylogeographic lineage of *Salmo trutta* (Sušnik et al. 2004; Bardakci et al. 2006).

Distribution. Zamantı river system (Soguksu, Karagöz, Uzunyayla watersheds), Seyhan river basin; Köprü River watershed. Fresh water and transitional water. Turkey region: MD. Endemic to the area.

Conservation. Critically endangered in Turkey (CR). Listed as critically endangered by IUCN since 1 Aug. 1996 (Baillie et al. 2004). Threats: FIT, HAB, EUT, CON, AQU, ABS. Global importance. Rare. Very sensitive to human activities. No keystone species. Severe decline. High priority for conservation action. Proposed for Annexes II and IV of the EU Habitats Directive, as a prioritary species.

Salmo salar Linnaeus, 1758 – Black Sea salmon

Distribution. Black Sea, Sea of Marmara and Aegean Sea and adjacent watersheds. Fresh water, transitional water and marine. Atlantic salmon stocks were re-introduced for salmon farming using eggs from Norway (Innal & Erk'akan 2006). Turkey regions: BS, MA, AS; EB, EM, AD, BD. Outside the area, temperate waters of North Atlantic including adjacent watersheds; landlocked forms existing in some areas.

Conservation. Extinct in Turkey (RE). Threats: FIT, HAB, EUT, CON, AQU, ABS. Very sensitive to human activities. No keystone species. Decline to extinction. High priority for conservation action. Listed on Appendix III of the Bern Convention (protected fauna; except at sea). Listed on Annexes II and V of the EU Habitats Directive (only in fresh water). Stocks of non-Black Sea watershed origin should not be protected.

Salmo trutta Linnaeus, 1758 – Brown trout; Alabalık

Taxonomy. Synonym: *Salmo trutta macrostigma* (Duméril, 1858).

Distribution. Native in Sea of Marmara, Aegean and Mediterranean Sea watersheds. Fresh water, transitional water and marine. Turkey regions: MA, AS, MS; AD, MD, (WL). Outside the area, northwestern Europe and Mediterranean Sea watersheds including freshwater and marine habitats, with migratory and stationary forms.

Conservation. Critically endangered in Turkey (CR); some present (introduced) stocks of non-Mediterranean origin not evaluated (NE). Very sensitive to human activities. Keystone species. Severe decline. High priority for conservation action (native stocks only).

Salvelinus fontinalis (Mitchill, 1814) – American brook trout

Distribution. Introduced into Anatolian Black Sea watersheds (Innal & Erk'akan 2006). Not native to Turkey. Fresh water. Turkey region: (BD). Outside the area, originally eastern North America; widely introduced.

Conservation. Not evaluated in Turkey (NE). Not native in Turkey. No conservation action advisable.

Coregonidae – Whitefish

Stenodus leucichthys (Güldenstädt, 1772) – Inconnu

Distribution. Kura-Aras river watersheds. Fresh water, transitional water and marine (fresh water only in Turkey). Turkey region: CD. Outside the area, Caspian Sea watersheds; North Pacific watersheds.

Conservation. Extinct in Turkey (RE). Caspian Sea basin population endangered (Baillie & Groombridge 1996). Threats: FIT, HAB, EUT, CON, AQU. Very sensitive to hu-

man activities. No keystone species. Decline to extinction. High priority for conservation action.

Esocidae – Pikes

Esox lucius Linnaeus, 1758 – Northern pike; Turna balığı
Distribution. Black Sea and central Anatolian lake watersheds. Introduced into Uluabat Gölü/Western Lakes watersheds and Gulf watersheds. Fresh water and transitional water. Turkey regions: EB, BD, CL, (WL, GD). Outside the area, circumpolar in temperate waters of the northern hemisphere.
Conservation. Endangered in Turkey (EN). Threats: FIT, HAB, EUT, CON, ABS. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Gonostomatidae – Bristlemouths

Cyclothone braueri Jespersen & Tåning, 1926 – Garrick; Işildak balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, worldwide in tropical and subtropical oceans, in the North Atlantic also in temperate waters north to 66°N.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. Keystone species. Decline unknown. Low priority for conservation action.

Cyclothone pygmaea Jespersen & Tåning, 1926 – Pygmy garrick; Işildak balığı
Distribution. Mediterranean Sea. Marine species. Turkey region: MS. Endemic to Mediterranean Sea.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Local importance. Sensitivity to human activities unknown. Keystone species. Decline unknown. Low priority for conservation action.

Sternoptychidae – Hatchetfishes

Argyropelecus hemigymnus Cocco, 1829 – Half-naked hatchetfish; Gümüş balta balığı
Distribution. Aegean Sea. Possibly also Mediterranean Sea; data deficient. Marine species. Turkey region: AS. Outside the area, in tropical and subtropical waters of all oceans.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Maurolicus muelleri (Gmelin, 1789) – Pearlsides; Işildak balığı
Distribution. Sea of Marmara and Aegean Sea. Possibly also Mediterranean Sea; data deficient. Marine species. Turkey regions: MA, AS. Outside the area, in tropical and temperate Atlantic, Southeast Pacific and West Pacific.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. Keystone species. Decline unknown. Low priority for conservation action.

Phosichthyidae – Lightfishes

Vinciguerria attenuata (Cocco, 1838) – Cocco's deepwater bristlemouth-fish; Işildak balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, in tropical and temperate waters of the Atlantic Ocean, straying into southwestern Indian Ocean and Southeast Pacific.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Vinciguerria poweriae (Cocco, 1838) – Power's deep-water bristlemouth-fish; Işildak balığı
Distribution. Aegean Sea. Possibly also Mediterranean Sea; data deficient. Marine species. Turkey region: AS. Outside the area, circumglobal in subtropical seas.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Stomiidae – Viperfishes

Chauliodus sloani Bloch & Schneider, 1801 – Sloane's viperfish; Engerek balığı
Distribution. Aegean Sea. Possibly also Mediterranean Sea; data deficient. Marine species. Turkey region: AS. Outside the area, in tropical and temperate waters of all oceans except southern central Atlantic, northern Indian Ocean, eastern Pacific north of the equator.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Stomias boa (Risso, 1810) – Scaly dragonfish; Kocaağiz balığı
Distribution. Sea of Marmara, Aegean Sea. Possibly also Mediterranean Sea; data deficient. Marine species. Turkey regions: MA, AS. Outside the area, eastern Atlantic from Portugal to South Africa; southwestern Atlantic; Southeast Pacific; subantarctic Indian Ocean.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Aulopidae – Aulopus

Aulopus filamentosus (Bloch, 1792) – Royal flagfin; Derinsu zurna balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Canary Islands south to Cape Verde Islands; Western Atlantic in Gulf of Mexico and Caribbean Sea.
Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT. Sensitive to human activities. No keystone species. Probable decline. Medium priority for conservation action.

Synodontidae – Lizardfishes

Saurida undosquamis (Richardson, 1848) – Brushtooth lizardfish; Lokum balığı, zurna balığı
Distribution. Aegean Sea and Mediterranean Sea. Lessepsian immigrant into Mediterranean Sea through the Suez Canal; not native to Turkey. Marine species. Turkey regions: (AS, MS). Outside the area, Indo-West Pacific from Red Sea and East Africa east to Samoa.
Conservation. Not evaluated in Turkey (NE). Not native in Turkey. No conservation action advisable.

Synodus saurus (Linnaeus, 1758) – Atlantic lizardfish; Zurna balığı
Distribution. Aegean Sea and Mediterranean Sea. Transitional water and marine. Turkey regions: AS, MS; AD, MD. Recorded from Koycegiz Lagoon/Dalyan River system by Akin et al. (2005: 676). Outside the area, Mediterranean Sea and eastern Atlantic from Morocco and Azores to Cape Verde Islands; Western Atlantic from Bermuda and Bahamas to Lesser Antilles.
Conservation. Vulnerable in Turkey (VU). Threats: FIT, FIB, HAB, EUT. Sensitive to human activities. No keystone species. Probable decline. Medium priority for conservation action.

Chlorophthalmidae – Greeneyes

Chlorophthalmus agassizi Bonaparte, 1840 – Shortnose greeneye; Yeşilgöz balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, circumglobal in tropical and temperate oceans.
Conservation. Near threatened in Turkey (NT). Threats: FIT, HAB, EUT. Sensitive to human activities. No keystone species. Probable decline. Medium priority for conservation action.

Ipnopidae – Spiderfishes

Bathypterois dubius Vaillant, 1888 – Spiderfish; Akdeniz örümcek balığı
Distribution. Aegean Sea. Possibly also Mediterranean Sea; data deficient. Only a single specimen known from Turkey (Kaya 1993). Marine species. Turkey region: AS. Outside the area, eastern Atlantic from British Isles to Sierra Leone; one record each from western Mediterranean Sea and northwestern Atlantic.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Paralepididae – Barracudinas

Arctozenus risso (Bonaparte, 1840) – Ribbon barracudina
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, worldwide in all tropical, temperate and cold oceans.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Lestidiops jayakari (Boulenger, 1889) – Jayakar's barracudina
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, worldwide in tropical and subtropical oceans except for Southeast Pacific.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Lestidiops sphyrenoides (Risso, 1820) – Barracuda barracudina
Distribution. Aegean Sea. Possibly also Mediterranean Sea; data deficient. Marine species. Turkey region: AS. Outside the area, Mediterranean Sea and eastern Atlantic from France to Mauritania.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Sudis hyalina Rafinesque-Schmaltz, 1810 – Transparent barracudina; Yalanci zargana
Distribution. Mediterranean Sea. Marine species. Turkey region: MS. Outside the area, Mediterranean Sea and Atlantic Ocean from 50°N to 40°S.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Myctophidae – Lanternfishes

Benthosema glaciale (Reinhardt, 1837) – Glacier lanternfish; Işildak balığı
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey

regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Greenland of Guinea; Baffin Bay.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. Keystone species. Decline unknown. Low priority for conservation action.

Ceratoscopelus maderensis (Lowe, 1839) – Madeira lanternfish; Işildak balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and tropical and warm temperate waters of the Atlantic Ocean.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. Keystone species. Decline unknown. Low priority for conservation action.

Diaphus holti Tåning, 1918 – Holt's lanternfish; Işildak balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and tropical and warm temperate Atlantic Ocean, straying into southwestern Indian Ocean.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. Keystone species. Decline unknown. Low priority for conservation action.

Diaphus metopoclampus (Cocco, 1829) – Spothead lanternfish; Işildak balığı
Distribution. Aegean Sea. Possibly also Mediterranean Sea; data deficient. Reported from Turkey on the basis of single specimen collected off Gökova Bay, southern Aegean Sea (Kaya & Bilecenoglu 2000). Marine species. Turkey region: AS. Outside the area, in tropical and temperate waters of Atlantic and Indian oceans and West Pacific.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. Keystone species. Decline unknown. Low priority for conservation action.

Diaphus rafinesquii (Cocco, 1838) – White-spotted lanternfish; Işildak balığı
Distribution. Aegean Sea. Possibly also Mediterranean Sea; data deficient. Marine species. Turkey region: AS. Outside the area, worldwide in tropical and temperate oceans.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. Keystone species. Decline unknown. Low priority for conservation action.

Electrona risso (Cocco, 1829) – Risso's lanternfish; Işildak balığı
Distribution. Mediterranean Sea. Marine species. Turkey region: MS. Outside the area, worldwide in tropical and warm temperate oceans.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. Keystone species. Decline unknown. Low priority for conservation action.

Gonichthys cocco (Cocco, 1829) – Silver lanternfish; Işildak balığı
Distribution. Mediterranean Sea. Marine species. Turkey region: MS. Outside the area, Mediterranean Sea and tropical and subtropical waters of the Atlantic Ocean.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. Keystone species. Decline unknown. Low priority for conservation action.

Hygophum benoiti (Cocco, 1838) – Benoit's lanternfish; Işildak balığı
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and North Atlantic circulatory current system.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. Keystone species. Decline unknown. Low priority for conservation action.

Lampanyctus crocodilus (Risso, 1810) – Jewel lanternfish; Işildak balığı
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and North Atlantic circulatory current system.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. Keystone species. Decline unknown. Low priority for conservation action.

Lampanyctus pusillus (Johnson, 1890) – Dwarf jewel lanternfish; Işildak balığı
Distribution. Mediterranean Sea. Marine species. Turkey region: MS. Outside the area, Mediterranean, tropical and subtropical Atlantic Ocean, and subtropical convergence of southern Indian Ocean and South Pacific.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. Keystone species. Decline unknown. Low priority for conservation action.

Lobianchia dofleini (Zugmayer, 1911) – Doflein's lanternfish; Işildak balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean, tropical and subtropical Atlantic Ocean, and subtropical convergence of southern Indian Ocean and South Pacific.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. Keystone species. Decline unknown. Low priority for conservation action.

Lobianchia gemellarii (Cocco, 1838) – Cocco's lanternfish; Işildak balığı
Distribution. Aegean Sea. Posibly also Mediterranean Sea; data deficient. Marine species. Turkey region: AS. Outside the area, worldwide in tropical and subtropical oceans.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. Keystone species. Decline unknown. Low priority for conservation action.

Myctophum punctatum Rafinesque-Schmaltz, 1810 – Spotted lanternfish; Işildak balığı
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and subtropical and temperate North Atlantic.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. Keystone species. Decline unknown. Low priority for conservation action.

Notoscopelus bolini Nafpaktitis, 1975 – Bolin's lanternfish; Işildak balığı
Distribution. Mediterranean Sea. Marine species. Turkey region: MS. Outside the area, Mediterranean Sea and subtropical and temperate northeastern Atlantic.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. Keystone species. Decline unknown. Low priority for conservation action.

Notoscopelus elongatus (Costa, 1844) – Elongate lanternfish; Işildak balığı
Distribution. Sea of Marmara. Possibly also Aegean Sea and Mediterranean Sea; data deficient. Marine species. Turkey region: MA. Endemic to Mediterranean Sea area.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Local importance. Sensitivity to human activities unknown. Keystone species. Decline unknown. High priority for conservation action.

Symbolophorus veranyi (Moreau, 1888) – Large-scale lanternfish; Işildak balığı
Distribution. Mediterranean Sea. Marine species. Turkey region: MS. Outside the area, Mediterranean Sea and tropical and warm temperate waters of the Atlantic Ocean.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. Keystone species. Decline unknown. Low priority for conservation action.

Lampridae – Opahs

Lampris guttatus (Brünnich, 1788) – Opah
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, worldwide in temperate oceans.
Conservation. Threatened migrant in Turkey (TM). Threats: FIB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Lophotidae – Crestfishes

Lophotus lacepede Giorna, 1809 – Crested oarfish; Tepeli kagit balığı
Distribution. Aegean Sea and Mediterranean Sea. Known from Turkey by a single record

(Bilecenoglu et al. 2001). Marine species. Turkey regions: AS, MS. Outside the area, worldwide in tropical and warm temperate oceans.
Conservation. Data deficient in Turkey (DD). Threats: FIB, EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Trachipteridae – Ribbonfishes

Trachipterus trachypterus (Gmelin, 1789) – Ribbon fish; Kagit balığı
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea; tropical and warm temperate Atlantic Ocean; Japan; Australia; Southeast Pacific.
Conservation. Vulnerable in Turkey (VU). Threats: FIB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Zu cristatus (Bonelli, 1819) – Scalloped ribbonfish; Kagit balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and tropical and warm temperate waters of all oceans.
Conservation. Data deficient in Turkey (DD). Threats: FIB, EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Regalecidae – Oarfishes

Regalecus glesne Ascanius, 1772 – King of herrings; Büyük kurdela balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and tropical and warm temperate waters of all oceans.
Conservation. Threatened migrant in Turkey (TM). Threats: FIB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Bregmacerotidae – Codlets

Bregmaceros atlanticus Goode & Bean, 1886 – Antenna codlet
Distribution. Mediterranean Sea. Marine species. Turkey region: MS. Outside the area, circumglobal in tropical and warm temperate oceans.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Macrouridae – Grenadiers

Caelorinchus caelorhincus (Risso, 1810) – Hollowsnout grenadier; Fare balığı
Taxonomy. Named *Caelorhynchus caelorhynchus* by authors.
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and warm temperate Northeast Atlantic.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Hymenocephalus italicus Giglioli, 1884 – Glasshead grenadier; Zarkafa balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea, tropical and warm temperate Atlantic, and Western Indian Ocean.
Conservation. Data deficient in Turkey (DD). Threats: FIB, EUT. Sensitivity to human ac-

tivities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Nezumia aequalis (Günther, 1878) – Common Atlantic grenadier; Fare balığı
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and tropical and temperate Atlantic Ocean.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Nezumia sclerorhynchus Valenciennes, 1838 – Roughtip grenadier; Fare balığı
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and equatorial and northern warm temperate Atlantic Ocean.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Trachyrincus scabrus (Rafinesque-Schmaltz, 1810) – Roughsnout grenadier; Uzun burunlu fare balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and tropical and warm temperate eastern Atlantic.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Moridae – Morid cods

Gadella maraldi (Risso, 1810) – Gadella; Kara mezgit
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and northeastern Atlantic from Portugal and Madeira to Azores, possibly further south.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. No keystone species. Probable decline. Medium priority for conservation action.

Mora moro (Risso, 1810) – Common mora
Distribution. Mediterranean Sea. Recorded from Turkey by Bilecenoglu et al. (2002: 243), on the basis of two specimens captured off Alanya, Antalya Bay. Marine species. Turkey region: MS. Outside the area, Mediterranean Sea and temperate Atlantic, Indian and Pacific oceans.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. No keystone species. Probable decline. Medium priority for conservation action.

Merlucciidae – Merluccid hakes

Merluccius merluccius (Linnaeus, 1758) – European hake; Bakalyaro, Berlam
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas, and northeastern Atlantic from Norway and Iceland south to Mauritania.
Conservation. Vulnerable in Turkey (VU). Threats: FIT, EUT. Sensitive to human activities. Keystone species. Decline unknown. Medium priority for conservation action.

Phycidae – Forkbeaks

Phycis blennoides (Brünnich, 1768) – Greater forkbeak; Gelincik balığı

Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and northeastern Atlantic from Norway and Iceland south to Mauritania.

Conservation. Vulnerable in Turkey (VU). Threats: FIT, HAB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Phycis phycis (Linné, 1766) – Forkbeak; Gelincik balığı

Distribution. Aegean Sea and Mediterranean Sea. Recorded from Koycegiz Lagoon/Dalyan River system by Akin et al. (2005: 676). Transitional water and marine. Turkey regions: AS, MS; AD, MD. Outside the area, Mediterranean Sea and northeastern Atlantic from Bay of Biscay and Azores south to Cape Verde Islands.

Conservation. Vulnerable in Turkey (VU). Threats: FIT, HAB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Gadidae – Cods

Gadiculus argenteus Guichenot, 1850 – Silvery cod; Pamukçuk balığı

Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Endemic to Mediterranean Sea and adjacent Atlantic coast of Morocco.

Conservation. Data deficient in Turkey (DD). Threats: FIB, EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Merlangius merlangus (Linnaeus, 1758) – Whiting; Mezgit

Distribution. Black Sea, Sea of Marmara and Aegean Sea. Black Sea to Aegean Sea populations isolated from other populations. Transitional and marine water. Turkey regions: BS, MA, AS; EB, EM, AD, BD. Outside the area, Mediterranean and Black seas, and eastern Atlantic from Barents Sea and Iceland south to Portugal.

Conservation. Vulnerable in Turkey (VU). Threats: FIT, EUT. Local importance. Sensitive to human activities. Keystone species. Decline unknown. High priority for conservation action.

Micromesistius poutassou (Risso, 1827) – Blue whiting; Derinsu mezgiti

Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and temperate North Atlantic.

Conservation. Vulnerable in Turkey (VU). Threats: FIT, EUT. Sensitive to human activities. Keystone species. Decline unknown. Medium priority for conservation action.

Trisopterus minutus (Linnaeus, 1758) – Poor cod; Tavuk balığı

Taxonomy. *Gadus capelanus* Lacepède, 1800 is a junior synonym according to Cohen in Cohen et al. (1990: 80). Recorded from Turkey as *Trisopterus luscus capelanus* by Bilecenoglu et al. (2002).

Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and northeastern Atlantic from Norway and Faroes south to Portugal and Morocco.

Conservation. Vulnerable in Turkey (VU). Threats: FIT, EUT. Sensitive to human activities. Keystone species. Decline unknown. Medium priority for conservation action.

Lotidae – Hakes

Gaidropsarus biscayensis (Collett, 1890) – Mediterranean bigeye rockling; Gelincik balığı

Distribution. Sea of Marmara and Aegean Sea. Aegean and Sea of Marmara population isolated from other populations. Marine species. Turkey regions: MA, AS. Outside the area,

Mediterranean Sea and northeastern Atlantic from Spain and Portugal to Madeira and Morocco.

Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT. Local importance. Sensitive to human activities. No keystone species. Decline unknown. Medium priority for conservation action.

Gaidropsarus mediterraneus (Linnaeus, 1758) – Shore rockling; Gelincik balığı

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean Sea and northeastern Atlantic from Norway and British Isles south to Morocco.

Conservation. Least concern in Turkey (LC). Threats: HAB, EUT. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Gaidropsarus vulgaris (Cloquet, 1824) – Three-bearded rockling; Gelincik balığı

Distribution. Sea of Marmara and Aegean Sea. Aegean and Sea of Marmara population isolated from other populations. Marine species. Turkey regions: MA, AS. Outside the area, Mediterranean Sea and northeastern Atlantic from Norway and Iceland south to Straits of Gibraltar.

Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT. Local importance. Sensitive to human activities. No keystone species. Decline unknown. Medium priority for conservation action.

Molva macrophthalma (Rafinesque-Schmaltz, 1810) – Spanish ling; Uzun gelincik balığı

Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, western Mediterranean Sea and northeastern Atlantic from Ireland to Spain.

Conservation. Vulnerable in Turkey (VU). Threats: FIT, HAB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Carapidae – Pearl fishes

Carapus acus (Brünnich, 1768) – Pearl fish; Inci balığı

Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Bay of Biscay south to Ascension Island.

Conservation. Vulnerable in Turkey (VU). Threats: FIB, HAB, EUT, HOS. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Ophidiidae – Snake blennies

Benthocometes robustus (Goode & Bean, 1886) – Deep-water cusk-eel

Distribution. Aegean Sea. Recorded from Turkey by Bilecenoglu et al. (in press). Marine species. Turkey region: AS. Outside the area, tropical and warm temperate Atlantic Ocean.

Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Ophidion barbatum Linnaeus, 1758 – Snake blenny; Kayiş balığı

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, northern Mediterranean and Black seas and northeastern Atlantic from southern England south to Senegal.

Conservation. Data deficient in Turkey (DD). Threats: FIB, HAB, EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Ophidion rochei Müller, 1845 – Roche's snake blenny; Kayiş balığı
Distribution. Black Sea, Sea of Marmara and Aegean Sea. Black Sea/Aegean Sea population probably isolated from other populations. Transitional and marine water. Turkey regions: BS, MA, AS; EB, EM, AD, BD. Endemic to Mediterranean and Black seas.
Conservation. Data deficient in Turkey (DD). Threats: FIB, HAB, EUT. Local importance. Sensitivity to human activities unknown. No keystone species. Decline unknown. Medium priority for conservation action.

Parophidion vassali (Risso, 1810) – Vassal's snake blenny; Kayiş balığı
Distribution. Sea of Marmara and Aegean Sea. Possibly also Turkish part of Mediterranean Sea; data deficient. Marine species. Turkey regions: MA, AS. Outside the area, Mediterranean Sea and northeastern Atlantic from Spain to Morocco.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Bythitidae – Viviparous brotulas

Bellottia apoda Giglioli, 1883 – Footless brotula; Inci balığı
Distribution. Aegean Sea. Probably also Turkish part of Mediterranean Sea; data deficient. Only a single specimen was recorded from Turkey by Kaya & Bilecenoglu (2000). Marine species. Turkey region: AS. Outside the area, Mediterranean Sea to Portugal and Madeira; possibly also subtropical Western Atlantic.
Conservation. Data deficient in Turkey (DD). Threats: FIB, HAB, EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Lophiidae – Anglerfishes

Lophius budegassa Spinola, 1807 – Black-bellied anglerfish; Fener balığı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and northeastern Atlantic from British Isles and North Sea south to Senegal.
Conservation. Vulnerable in Turkey (VU). Threats: FIT, HAB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Lophius piscatorius Linnaeus, 1758 – Angler; Fener balığı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and northeastern Atlantic from Barents Sea and Iceland south to Mauritania.
Conservation. Vulnerable in Turkey (VU). Threats: FIT, HAB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Mugilidae – Mullets

Chelon labrosus (Risso, 1827) – Thicklip grey mullet; Kefal balığı, mavraki
Taxonomy. Commonly used synonym: *Mugil septentrionalis* Günther, 1861. Recorded from Turkey by Kuru (2004: 16) under the name *Chelon labrossus*.
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea and adjacent estuaries. Fresh water, transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from Norway and Iceland south to Senegal and Cape Verde Islands.
Conservation. Least concern in Turkey (LC). Threats: FIT. Not sensitive to human activities. Keystone species. Stable populations. Low priority for conservation action.

Liza abu (Heckel, 1843) – Abu mullet; Kefal balığı

Distribution. Asi Nehri/Orontes, Firat Nehri/Euphrates and Dicle Nehri/Tigris watersheds. Fresh water, transitional and marine water. Turkey regions: OD, GD. Endemic to Middle East.

Conservation. Endangered in Turkey (EN). Threats: FIT, HAB, EUT, CON, ABS. Rare. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive.

Liza aurata (Risso, 1810) – Golden grey mullet; Altinbaşkefal balığı

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea and adjacent estuaries. Fresh water, transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from Scotland south to Cape Verde Islands.

Conservation. Data deficient in Turkey (DD). Threats: FIT. Not sensitive to human activities. Keystone species. Decline unknown. Low priority for conservation action.

Liza carinata [Valenciennes (ex Ehrenberg) in Cuvier & Valenciennes, 1836] – Keeled mullet; Kefal balığı, bildircin kefal

Distribution. Mediterranean Sea and adjacent estuaries. Lessepsian immigrant into Mediterranean through the Suez Canal; not native to Turkey. Fresh water, transitional and marine water. Turkey regions: (MS; MD). Outside the area, originally Red Sea east to India, possibly China and Japan.

Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Liza haematocheila (Temminck & Schlegel, 1845) – So-iuy mullet; Rus kefali, pelingas

Taxonomy. *Mugil soiuy* Basilewsky, 1855 is a synonym (see Parin 2003: 322).

Distribution. Black Sea, Sea of Marmara and Aegean Sea. Introduced into Russian part of the Sea of Azov and Black Sea; dispersed through Black Sea and Sea of Marmara into northern Aegean Sea and adjacent estuaries; not native in Turkey. Fresh water, transitional and marine water. Turkey regions: (BS, MA, AS; EB, EM, AD, BD). Outside the area, originally in warm temperate waters of Northwest Pacific.

Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Liza ramado (Risso, 1810) – Thinlip mullet; Pulatarina balığı, kefal, ceran

Taxonomy. Named *Liza ramada* by authors.

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea and adjacent estuaries. Fresh water, transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from southern Norway south to Morocco.

Conservation. Least concern in Turkey (LC). Threats: FIT. Not sensitive to human activities. Keystone species. Populations stable. Low priority for conservation action.

Liza saliens (Risso, 1810) – Leaping mullet; Kefal balığı, kobar balığı, kastros

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea and adjacent estuaries. Introduced into Caspian Sea basin; not native in Kura-Aras river system, but native in other parts of Turkey. Fresh water, transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD, (CD). Outside the area, Mediterranean and Black seas and eastern Atlantic from France south to Morocco.

Conservation. Least concern in Turkey (LC). Threats: FIT. Not sensitive to human activities. Keystone species. Populations stable. Low priority for conservation action.

Mugil cephalus Linnaeus, 1758 – Flathead mullet; Haskefal balığı, topan kefal

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea and adjacent estuaries. Fresh water, transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, cosmopolitan in coastal tropical and warm temperate oceans.

Conservation. Least concern in Turkey (LC). Threats: FIT. Not sensitive to human activities. Keystone species. Populations stable. Low priority for conservation action.

Oedalechilus labeo (Cuvier, 1829) – Boxlip mullet; Dudakli kefal balığı
Distribution. Estuaries in Sea of Marmara, Aegean Sea and Mediterranean Sea watersheds. Fresh water, transitional and marine water. Turkey regions: MA, AS, MS; EM, AD, MD, OD. Outside the area, Mediterranean Sea and eastern Atlantic from Gibraltar south to Morocco.
Conservation. Least concern in Turkey (LC). Threats: FIT. Local importance. Not sensitive to human activities. Keystone species. Populations stable. Low priority for conservation action.

Atherinidae – Sand smelts

Atherina boyeri Risso, 1810 – Big-scale sand smelt; Gümüş balığı
Taxonomy. A subspecies *Atherina boyeri pontica* (Eichwald, 1838) recognised by some authors from Black Sea area including Sea of Marmara, while other populations would belong to *A. boyeri boyeri*.
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea and adjacent estuaries. Introduced into several western lakes and Beyşehir Gölü (Innal & Erk'akan 2006). Fresh water, transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, WL, BD, OD. Recorded from Lake İznik by Özuluğ et al. (2005: 373). Outside the area, Mediterranean and Black seas and northeastern Atlantic from Spain, Portugal and Madeira south to Mauritania.
Conservation. Least concern in Turkey (LC). Listed as data deficient by IUCN since 1 Aug. 1996 (Baillie et al. 2004). Threats: HAB, EUT. Not sensitive to human activities. Keystone species. Decline unknown. Low priority for conservation action.

Atherina hepsetus Linnaeus, 1758 – Mediterranean sand smelt; Çamuka balığı, gümüş balığı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea and adjacent estuaries. Introduced into Eğirdir Gölü. Fresh water, transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD, (CL), WL. Outside the area, Mediterranean and Black seas and Atlantic Ocean from Spain and Madeira south to Morocco and Canary Islands.
Conservation. Least concern in Turkey (LC). Threats: HAB, EUT. Not sensitive to human activities. Keystone species. Decline unknown. Low priority for conservation action.

Atherinomorus lacunosus (Forster in Bloch & Schneider, 1801) – Hardyhead silverside; Gümüş balığı
Distribution. Aegean Sea and Mediterranean Sea. Lessepsian immigrant into Mediterranean through the Suez Canal; not native to Turkey. Marine species. Turkey regions: (AS, MS). Outside the area, Indo-West Pacific from Red Sea, East Africa, Comores, Madagascar, Mascarenes and Seychelles east to Hawaiian Islands and Tuamotu Archipelago, north to southern Japan and Bonin/Ogasawara Islands, south to Western Australia, New South Wales/Australia, and Rapa.
Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Exocoetidae – Flying fishes

Cheilopogon heterurus (Rafinesque-Schmaltz, 1810) – Mediterranean flyingfish; Uçan balığı
Distribution. Aegean Sea, Mediterranean Sea. Recently recorded from Datça Peninsula, southern Aegean Sea (Okuş et al. 2004). Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea; subtropical waters of North Atlantic and Pacific oceans.
Conservation. Vulnerable in Turkey (VU). Threats: FIB, EUT. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action.

Hirundichthys rondeletii (Valenciennes in Cuvier & Valenciennes, 1847) – Black-wing flyingfish; Uçan balığı
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and tropical and warm temperate waters of Atlantic Ocean.
Conservation. Vulnerable in Turkey (VU). Threats: FIB, EUT. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action.

Parexocoetus mento (Valenciennes in Cuvier & Valenciennes, 1847) – African flyingfish; Uçan balığı
Distribution. Aegean Sea and Mediterranean Sea. Lessepsian immigrant into Mediterranean through the Suez Canal; not native to Turkey. Marine species. Turkey regions: (AS, MS). Outside the area, originally Red Sea and East Africa east to Marshall Islands and Fiji.
Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Hemiramphidae – Halfbeaks

Hemiramphus far (Forsskål in Niebuhr, 1775) – Blackbarred halfbeak; Çomak balığı
Distribution. Aegean Sea and Mediterranean Sea. Lessepsian immigrant into Mediterranean through the Suez Canal; not native to Turkey. Marine species. Turkey regions: (AS, MS). Outside the area, originally Indo-West Pacific from Red Sea, East and South Africa, Madagascar, Mascarenes and Seychelles east to Philippines, Samoa and Tonga, north to Izu Peninsula/southern Japan, south to Broome/Western Australia and New South Wales/Australia.
Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Hyporhamphus affinis (Günther, 1866) – Tropical halfbeak; Çomak balığı
Distribution. Mediterranean Sea. Lessepsian immigrant into Mediterranean through the Suez Canal; not native to Turkey. Marine species. Turkey region: (MS). Outside the area, originally Red Sea and East Africa east to Western Pacific.
Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Hyporhamphus picarti (Valenciennes in Cuvier & Valenciennes, 1847) – African halfbeak; Çomak balığı
Distribution. Mediterranean Sea. Marine species. Turkey region: MS. Outside the area, Mediterranean Sea and eastern Atlantic from Morocco to Angola.
Conservation. Data deficient in Turkey (DD). Threats: FIT, FIB, EUT, LES. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Belonidae – Garpikes

Belone acus Risso, 1827 – Mediterranean garpike; Zargana
Taxonomy. Treated as a valid subspecies of *Belone belone* (Linnaeus, 1761) by Collette (2003: 2, 15). *Belone gracilis* Lowe, 1839 is a synonym.
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Endemic to Mediterranean Sea and adjacent Atlantic Ocean.
Conservation. Vulnerable in Turkey (VU). Threats: FIT. Sensitive to human activities. No keystone species. Probable decline. Medium priority for conservation action.

Belone euxini Günther, 1866 – Black Sea garpike; Zargana
Taxonomy. Treated as a valid subspecies of *Belone belone* (Linnaeus, 1761) by Collette (2003: 3, 14).
Distribution. Black Sea and Sea of Marmara. Transitional and marine water. Turkey regions: BS, MA. Endemic to Black Sea, Sea of Azov and Sea of Marmara.

Conservation. Data deficient in Turkey (DD). Threats: FIT, EUT. Local importance. Sensitive to human activities. No keystone species. Probable decline. Medium priority for conservation action.

Belone svetovidovi Collette & Parin, 1970 – Svetovidov's garpike; Zargana
Taxonomy. Data deficient; previously confused with *Belone acus* Risso, 1827 and *Belone belone* (Linnaeus, 1761).
Distribution. Aegean Sea. Possibly also Turkish part of Mediterranean Sea. Marine species. Turkey region: AS. Outside the area, Mediterranean Sea and northeastern Atlantic from Ireland to Portugal.
Conservation. Data deficient in Turkey (DD). Threats: FIT. Sensitive to human activities. No keystone species. Probable decline. Medium priority for conservation action.

Tylosurus imperialis (Rafinesque-Schmaltz, 1810) – Imperial needlefish; Zargana
Taxonomy. Treated as a valid subspecies of *Tylosurus acus* (Lacepède, 1803) by Collette (2003: 9, 10).
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Morocco to Cape Verde Islands.
Conservation. Data deficient in Turkey (DD). Threats: FIT. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Scomberesocidae – Sauries

Scomberesox saurus (Walbaum, 1792) – Atlantic saury; Pinnüllü zargana
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and temperate North Atlantic.
Conservation. Vulnerable in Turkey (VU). Threats: FIT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action. Highly migratory species, listed on Annex I of the 1982 Convention on the Law of the Sea (Anonymus 1994).

Cyprinodontidae – Killifishes

**Aphanius anatoliae* (Leidenforst, 1912) – Anatolian giant killifish; Dişli sazancık balığı
Taxonomy. Named *Lebias anatoliae* by authors. Recorded from Turkey by Kuru (2004: 16) under the name *Aphanius anatoliae anatoliae*.
Distribution. Western and central Anatolian lakes. Fresh water and transitional water. Turkey regions: WL, CL. Endemic to the area.
Conservation. Endangered in Turkey (EN). Listed as endangered by IUCN since 1 Aug. 1996 (Baillie et al. 2004). Threats: HAB, EUT, CON, ABS, AQU. Is threatened due to pollution (Crivelli 1996). Global importance. Rare. Very sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive.

**Aphanius asquamatus* (Sözer, 1942) – Scaleless killifish; Dişli sazancık balığı
Taxonomy. Named *Lebias asquamatus* by authors.
Distribution. Hazar Gölü, eastern Anatolia. Fresh water species. Turkey region: EL. Endemic to the area.
Conservation. Critically endangered in Turkey (CR). Listed as data deficient by IUCN since 1 Aug. 1996 (Baillie et al. 2004). Threats: HAB, EUT, CON, ABS, AQU. Global importance. Rare. Very sensitive to human activities. No keystone species. Severe decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive.

**Aphanius burdurensis* (Ermin in Aksiray, 1946) – Burdur killifish; Dişli sazancık balığı
Taxonomy. Named *Lebias burdurensis* by authors.

Distribution. Burdur Gölü, central Anatolia. Fresh water and transitional water. Turkey region: CL. Endemic to the area.
Conservation. Critically endangered in Turkey (CR). Threats: HAB, EUT, CON, ABS, AQU. Global importance. Rare. Very sensitive to human activities. No keystone species. Severe decline. High priority for conservation action.

**Aphanius danfordii* (Boulenger, 1890) – Danford's killifish; Dişli sazancık balığı
Taxonomy. *Aphanius chantrei* (Gaillard, 1895) is a junior synonym according to Wildekamp et al. (1999: 32). Named *Lebias danfordii* by authors.
Distribution. Central Anatolian lake watersheds. Fresh water and transitional water. Turkey region: CL. Endemic to the area.
Conservation. Critically endangered in Turkey (CR). Threats: HAB, EUT, CON, ABS, AQU. Global importance. Very sensitive to human activities. No keystone species. Severe decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive.

Aphanius fasciatus (Valenciennes in Humboldt & Valenciennes, 1821) – Mediterranean banded killifish; Dişli sazancık balığı
Taxonomy. Named *Lebias fasciatus* by authors.
Distribution. Estuaries in Sea of Marmara, Aegean Sea and Mediterranean Sea watersheds. Fresh water, transitional and marine water. Turkey regions: MA, AS, MS; AD, MD, OD. Endemic to estuaries and coastal watersheds of the Mediterranean Sea.
Conservation. Near threatened in Turkey (NT). Listed as data deficient by IUCN since 1 Aug. 1996 (Baillie et al. 2004). Threats: HAB, EUT, CON, ABS, AQU. Local importance. Sensitive to human activities. No keystone species. Significant/regional decline. Medium priority for conservation action. Listed on Appendix II of the Bern Convention (protected fauna) (Anonymus 1979). Listed on Annex II of the EU Habitats Directive.

Aphanius mento (Heckel, 1843) – Pearl-spotted killifish; Dişli sazancık balığı
Taxonomy. Commonly used synonyms: *Lebias cypris* Heckel, 1843; *Aphanius mento scriptus* Goren, 1974.
Distribution. Mediterranean Sea and Asi Nehri/Orontes watersheds. Introduced into Nemrut Crater lake in the 1980s (Innal & Erk'akan 2006). Fresh water and transitional water. Turkey regions: AD, MD, OD, GD; (EL). Endemic to southern Turkey and Middle East.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS, AQU. Local importance. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive.

**Aphanius splendens* (Kosswig & Sözer, 1945) – Splendid killifish; Dişli sazancık balığı
Taxonomy. Named *Lebias splendens* by authors. Recorded from Turkey by Kuru (2004: 16) under the name *Aphanius anatoliae splendens*.
Distribution. Gölçük Gölü, west of Isparta, central Anatolia. Fresh water species. Turkey region: CL. Endemic to the area.
Conservation. Critically endangered in Turkey (CR). Listed as critically endangered by IUCN since 1 Aug. 1996 (Baillie et al. 2004). Threats: HAB, EUT, CON, ABS, AQU. Global importance. Very sensitive to human activities. No keystone species. Severe decline. High priority for conservation action. Proposed for Annexes II and IV of the EU Habitats Directive, as a prioritary species.

**Aphanius sureyanus* (Neu, 1937) – Sureyan killifish; Dişli sazancık balığı
Taxonomy. Named *Lebias sureyanus* by authors. Recorded from Turkey by Kuru (2004: 16) under the name *Aphanius anatoliae sureyanus*.
Distribution. Burdur Gölü, central Anatolia. Fresh water and transitional water. Turkey region: CL. Endemic to the area.
Conservation. Critically endangered in Turkey (CR). Listed as critically endangered by IUCN since 1 Aug. 1996 (Baillie et al. 2004). Threats: HAB, EUT, CON, ABS, AQU. Global importance. Very sensitive to human activities. No keystone species. Severe de-

cline. High priority for conservation action. Proposed for Annexes II and IV of the EU Habitats Directive, as a prioritary species.

**Aphanius transgrediens* (Ermin, 1946) – Acipinar killifish; Dişli sazancık balığı
Taxonomy. Treated as a valid subspecies of *Aphanius anatoliae* (Leidenfrost, 1912) by Hrbek & Wildekamp (2003: 140) and Kuru (2004: 16).
Distribution. Stream, fed by the Acipinar spring at the west end of Lake Aci, Denizli District, central Anatolia. Fresh water species. Turkey region: CL. Endemic to the area.
Conservation. Critically endangered in Turkey (CR). Listed as critically endangered by IUCN since 1 Aug. 1996 (Baillie et al. 2004). Threats: HAB, EUT, CON, ABS, AQU. Global importance. Very sensitive to human activities. No keystone species. Severe decline. High priority for conservation action. Proposed for Annexes II and IV of the EU Habitats Directive, as a prioritary species.

**Aphanius villwocki* Hrbek & Wildekamp, 2003 – Villwock's killifish; Dişli sazancık balığı
Distribution. Sakarya Nehri watershed, central Anatolia. Fresh water species. Turkey region: BD. Endemic to the area.
Conservation. Critically endangered in Turkey (CR). Threats: HAB, EUT, CON, ABS, AQU. Global importance. Very sensitive to human activities. No keystone species. Significant/regional decline. High priority for conservation action. Proposed for Annexes II and IV of the EU Habitats Directive, as a prioritary species.

Poeciliidae – Poeciliids

Gambusia affinis (Baird & Girard, 1853) – Eastern mosquitofish; Sivrisinek balığı
Taxonomy. Recorded from Turkey by Coad (1991: 20) and Kuru (2004: 16).
Distribution. Introduced into Gulf watersheds. Fresh water and transitional water (fresh water only in Turkey). Turkey region: (GD). Outside the area, originally southeastern North America; widely introduced.
Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Gambusia holbrooki Girard in Agassiz, 1859 – Holbrook's mosquitofish; Sivrisinek balığı
Distribution. Widely introduced into Turkey; not native to Turkey. Fresh water and transitional water. Outside the area, originally southeastern North America; introduced worldwide in tropical and warm temperate freshwater habitats.
Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Trachichthyidae – Slimeheads

Hoplostethus mediterraneus Cuvier, 1829 – Mediterranean slimehead; Kütük balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, tropical and warm temperate waters of Atlantic Ocean; Mediterranean Sea; Red Sea and South Africa in Western Indian Ocean.
Conservation. Endangered in Turkey (EN). Threats: FIT, HAB, EUT. Very sensitive to human activities. No keystone species. Significant decline. High priority for conservation action.

Holocentridae – Squirrelfishes and soldierfishes

Sargocentron rubrum (Forsskål in Niebuhr, 1775) – Redcoat; Hindistan balığı, naylon balığı, asker balığı
Distribution. Aegean Sea and Mediterranean Sea. Lessepsian immigrant into Mediterranean through the Suez Canal; not native to Turkey. Marine species. Turkey regions: (AS, MS). Outside the area, originally Red Sea and East Africa to Tonga, north to southern Japan, south to Western Australia, New South Wales/Australia, and Lord Howe Island.

Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Zeidae – John dories

Zeus faber Linnaeus, 1758 – John dory; Dülger, Peygamber balığı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean Sea; eastern Atlantic from Norway south to South Africa; temperate waters of Indian and West Pacific oceans.
Conservation. Near threatened in Turkey (NT). Threats: FIT, FIB, EUT. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Gasterosteidae – Sticklebacks

Gasterosteus aculeatus Linnaeus, 1758 – Three-spined stickleback; Dikence balığı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea and adjacent watersheds. Fresh water, transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, WL, BD. Outside the area, circumarctic in temperate freshwater and marine habitats of Europe, North Asia, and North America.
Conservation. Endangered in Turkey (EN). Threats: EUT, CON, HAB, ABS. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Pungitius platygaster (Kessler, 1859) – Southern ninespine stickleback; Dikence balığı
Distribution. European Black Sea and adjacent watersheds. Fresh water, transitional water and marine. Turkey regions: BS; EB. Outside the area, northern Black Sea watersheds.
Conservation. Data deficient in Turkey (DD). Threats: EUT, CON, HAB. Rare. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Syngnathidae – Seahorses and pipefishes

Hippocampus fuscus Rüppell, 1838 – Sea pony; Denizatı
Distribution. Mediterranean Sea. Lessepsian immigrant into Mediterranean through the Suez Canal; not native to Turkey. Marine species. Turkey region: (MS). Outside the area, originally Red Sea endemic; records from other areas need verification.
Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native. For international trade, export is regulated by a licensing system (CITES II, since 15 May 2004).

Hippocampus guttulatus Cuvier, 1829 – Longsnouted seahorse; Denizatı
Taxonomy. Named *Hippocampus ramulosus* (non Leach in Leach & Nodder 1814) by authors.
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea and adjacent estuaries. Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean Sea and northeastern Atlantic from British Isles south to Morocco, Canary Islands, and Azores.
Conservation. Endangered in Turkey (EN). Threats: FIT, HAB, EUT. Rare. Very sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Listed on Appendix II of the Bern Convention (Anonymus 1979, as *Hippocampus ramulosus*). For international trade, export is regulated by a licensing system (CITES II, since 15 May 2004). In the European Union, an additional permit is needed for import. Proposed for Annexes II and IV of the EU Habitats Directive, as a prioritary species.

Hippocampus hippocampus (Linnaeus, 1758) – Shortsnouted seahorse; Denizatı

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea and adjacent estuaries. Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean Sea and eastern Atlantic from North Sea south to Gulf of Guinea.

Conservation. Endangered in Turkey (EN). Threats: FIT, HAB, EUT. Rare. Very sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Listed on Appendix II of the Bern Convention (Anonymus 1979). For international trade, export is regulated by a licensing system (CITES II, since 15 May 2004). In the European Union, an additional permit is needed for import. Proposed for Annexes II and IV of the EU Habitats Directive, as a prioritary species.

Nerophis maculatus Rafinesque-Schmaltz, 1810 – Spotted pipefish; Deniziğnesi

Distribution. Sea of Marmara. Transitional and marine water. Turkey region: MA. Outside the area, Mediterranean Sea and eastern Atlantic from Portugal to Azores.

Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT. Local importance. Sensitive to human activities. No keystone species. Probable decline. Medium priority for conservation action.

Nerophis ophidion (Linnaeus, 1758) – Straight-nose pipefish; Deniziğnesi

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea and adjacent estuaries. Fresh water, transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and northeastern Atlantic from Norway south to Morocco.

Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT. Sensitive to human activities. No keystone species. Probable decline. Medium priority for conservation action.

Syngnathus abaster Risso, 1827 – Blackstripe pipefish; Iğne balığı, deniziğnesi balığı

Taxonomy. Commonly used synonym: *Syngnathus nigrolineatus* Eichwald, 1831.

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea and adjacent watersheds. Fresh water, transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from Bay of Biscay south to Gibraltar.

Conservation. Data deficient in Turkey (DD). Listed as data deficient by IUCN since 1 Aug. 1996 (Baillie et al. 2004). Threats: HAB, EUT. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action. Listed on Appendix III of the Bern Convention (protected fauna).

Syngnathus acus Linnaeus, 1758 – Greater pipefish; Deniziğnesi

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea and adjacent estuaries. Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from Norway to Gambia; Namibia to South Africa.

Conservation. Near threatened in Turkey (NT). Threats: HAB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Syngnathus phlegon Risso, 1827 – Phlegon pipefish; Deniziğnesi

Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Endemic to Mediterranean Sea and adjacent Atlantic coasts.

Conservation. Near threatened in Turkey (NT). Threats: HAB, EUT. Local importance. Sensitive to human activities. No keystone species. Decline unknown. Medium priority for conservation action.

Syngnathus rostellatus Nilsson, 1855 – Nilsson's pipefish; Deniziğnesi

Distribution. Mediterranean Sea. Record from Mediterranean Sea needs verification. Transitional and marine water. Turkey regions: MS; MD. Outside the area, northeastern Atlantic from Norway south to Bay of Biscay.

Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT. Not sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Syngnathus schmidti Popov, 1927 – Schmidt's pipefish; Deniziğnesi
Distribution. Black Sea and Sea of Marmara. Transitional water species. Turkey regions: BS, MA. Endemic to Black Sea, Sea of Azov and Sea of Marmara.
Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT. Local importance. Sensitive to human activities. No keystone species. Probable decline. Medium priority for conservation action.

Syngnathus tenuirostris Rathke, 1837 – Narrow-snouted pipefish; Deniziğnesi
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Endemic to Adriatic Sea, Tyrrhenian Sea, and seas around Turkey including Black Sea.
Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT. Local importance. Sensitive to human activities. No keystone species. Probable decline. Medium priority for conservation action.

Syngnathus typhle Linnaeus, 1758 – Broad-snouted pipefish; Geniş burunlu deniziğnesi
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea and adjacent estuaries. Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and northeastern Atlantic from northern Norway south to Morocco, including Baltic Sea.
Conservation. Near threatened in Turkey (NT). Threats: HAB, EUT. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Syngnathus variegatus Pallas, 1814 – Variegated pipefish; Deniziğnesi
Distribution. Black Sea. Transitional water species. Turkey region: BS. Endemic to Black Sea and Sea of Azov.
Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT. Local importance. Sensitive to human activities. No keystone species. Probable decline. Medium priority for conservation action.

Fistulariidae – Flutemouths

Fistularia commersonii Rüppell, 1838 – Bluespotted cornetfish; Külah balığı
Distribution. Aegean Sea and Mediterranean Sea. Lessepsian immigrant into Mediterranean through the Suez Canal; not native to Turkey. Marine species. Turkey regions: (AS, MS). Outside the area, originally Indo-Pacific from Red Sea, East and South Africa, Madagascar, Mascarenes, Maldives and Chagos Archipelago east to Panama, north to southern Japan, Bonin/Ogasawara and Hawaiian Islands, south to Western Australia at 19°09′S, New Zealand and Rapa.
Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Centriscidae – Snipefishes

Macroramphosus gracilis (Lowe, 1839) – Slender snipefish; Boru balığı
Distribution. Aegean Sea and Mediterranean Sea. Recorded from Turkey by Bilecenoglu (2006). Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and worldwide in tropical and warm temperate oceans.
Conservation. Data deficient in Turkey (DD). Threats: FIB, HAB, EUT. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Macroramphosus scolopax (Linnaeus, 1758) – Longspine snipefish; Boru balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and in tropical and warm temperate waters of Atlantic Ocean and Indo-West Pacific.
Conservation. Data deficient in Turkey (DD). Threats: FIB, HAB, EUT. Sensitive to hu-

man activities. No keystone species. Decline unknown. Low priority for conservation action.

Mastacembelidae – Spiny eels

Mastacembelus mastacembelus (Banks & Solander, 1794) – Euphrates spiny eel; Dikenli yilan balığı

Taxonomy. Synonym: *Ophidium simack* Walbaum, 1792. Recorded from Turkey by Kuru (2004: 18) under the name *Mastacembelus simack*.

Distribution. Quwayq and Gulf watersheds. Fresh water and transitional water (fresh water only in Turkey). Turkey regions: QD, GD. Endemic to Quwayq and Gulf watersheds.

Conservation. Critically endangered in Turkey (CR). Extinct in Quwayq watershed. Threats: HAB, EUT, CON, ABS. Very sensitive to human activities. Local importance. No keystone species. Significant/regional decline. High priority for conservation action.

Dactylopteridae – Flying gurnards

Dactylopterus volitans (Linnaeus, 1758) – Flying gurnard; Uçan kirlangiç

Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and tropical and warm temperate waters of Atlantic Ocean.

Conservation. Data deficient in Turkey (DD). Threats: FIB, EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Sebastidae – Rockcods and thornyheads

Helicolenus dactylopterus (Delaroche, 1809) – Blackbelly rosefish; Derinsu iskorpiti

Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and tropical and temperate waters of Atlantic Ocean.

Conservation. Vulnerable in Turkey (VU). Threats: FIT, EUT. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action.

Scorpaenidae – Scorpionfishes

Scorpaena elongata Cadenat, 1943 – Slender rockfish; İskorpit

Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Morocco south to Namibia.

Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT. Rare. Sensitive to human activities. No keystone species. Decline unknown. Medium priority for conservation action.

Scorpaena maderensis Valenciennes in Cuvier & Valenciennes, 1833 – Madeira rockfish; Madeira iskorpiti

Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Azores, Madeira and Morocco south to Cape Verde Islands.

Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT. Rare. Sensitive to human activities. No keystone species. Decline unknown. Medium priority for conservation action.

Scorpaena notata Rafinesque-Schmaltz, 1810 – Small red rockfish; Benekli iskorpit
Taxonomy. *Scorpaena scrofa afimbria* Slastenenko, 1935 is a junior synonym (however, it was described as an infrasubspecific taxon and is probably not available).
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS. Outside the area, Mediterranean and Black seas and eastern Atlantic from Bay of Biscay and Azores south to Senegal.
Conservation. Vulnerable in Turkey (VU). Threats: FIT, HAB, EUT. Sensitive to human activities. Keystone species. Significant decline. High priority for conservation action.

Scorpaena porcus Linnaeus, 1758 – Black scorpionfish; Lipsoz
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and northeastern Atlantic from British Isles south to Azores, Canary Islands, and Morocco.
Conservation. Least concern in Turkey (LC). Threats: FIT, HAB, EUT. Not sensitive to human activities. Keystone species. Decline unknown. Low priority for conservation action.

Scorpaena scrofa Linnaeus, 1758 – Large-scale scorpionfish; İskorpit, adabeyi
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Recorded from Koycegiz Lagoon/Dalyan River system by Akin et al. (2005: 676). Transitional and marine water. Turkey regions: MA, AS, MS; AD, MD. Outside the area, Mediterranean Sea and eastern Atlantic from British Isles south to Cape Verde Islands, possibly also South Africa.
Conservation. Vulnerable in Turkey (VU). Threats: FIT, HAB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Triglidae – Gurnards

Chelidonichthys cuculus (Linnaeus, 1758) – East Atlantic red gurnard; Kirlangiç, dikenli kirlangiç
Taxonomy. Frequently used synonym: *Aspitrigla cuculus*.
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from British Isles south to Azores and Mauritania.
Conservation. Near threatened in Turkey (NT). Threats: FIT, HAB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Chelidonichthys gurnardus (Linnaeus, 1758) – Grey gurnard; Benekli kirlangiç
Taxonomy. Frequently used synonym: *Eutrigla gurnardus*.
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from Norway and Iceland south to Madeira and Morocco.
Conservation. Vulnerable in Turkey (VU). Threats: FIT, HAB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Chelidonichthys lastoviza (Bonnaterre, 1788) – Streaked gurnard; Mazak
Taxonomy. Frequently used synonym: *Trigloporus lastoviza*.
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: MA, AS, MS; EM, AD, MD, OD. Outside the area, Mediterranean Sea, and eastern Atlantic from Norway south to South Africa, and around the Cape of Good Hope to Mozambique/Indian Ocean.
Conservation. Vulnerable in Turkey (VU). Threats: FIT, HAB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Chelidonichthys lucernus (Linnaeus, 1758) – Tub gurnard; Kirlangiç
Taxonomy. Frequently used synonym: *Trigla lucerna*.
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and northeastern Atlantic from Norway south to Mauritania.
Conservation. Vulnerable in Turkey (VU). Threats: FIT, HAB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Chelidonichthys obscurus (Walbaum, 1792) – Longfin gurnard; Antenli kirlangiç
Taxonomy. Frequently used synonym: *Aspitrigla obscura*.
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from British Isles south to Azores, Madeira and Mauritania.
Conservation. Vulnerable in Turkey (VU). Threats: FIT, HAB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Lepidotrigla cavillone (Lacepède, 1801) – Large-scaled gurnard; Kirlangiç
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: MA, AS, MS; EM, AD, MD, OD. Outside the area, Mediterranean Sea and eastern Atlantic from Portugal south to Mauritania.
Conservation. Vulnerable in Turkey (VU). Threats: FIT, HAB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Lepidotrigla dieuzeidei Blanc & Hureau, 1973 – Spiny gurnard; Kirlangiç
Distribution. Sea of Marmara and Aegean Sea. Possibly also in Turkish part of Mediterranean Sea; data deficient. Transitional and marine water. Turkey regions: MA, AS; EM, AD. Outside the area, Mediterranean Sea and eastern Atlantic from Morocco south to Guinea Bissau.
Conservation. Vulnerable in Turkey (VU). Threats: FIT, HAB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Trigla lyra Linnaeus, 1758 – Piper gurnard; Kirlangiç, öksüz
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Recorded from Koycegiz Lagoon/Dalyan River system by Akin et al. (2005: 676). Transitional and marine water. Turkey regions: MA, AS, MS; AD, MD, OD. Outside the area, Mediterranean Sea and eastern Atlantic from British Isles south to Namibia.
Conservation. Vulnerable in Turkey (VU). Threats: FIT, HAB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Peristediidae – Armoured searobins

Peristedion cataphractum (Linnaeus, 1758) – African armoured searobin; Dikenli öksüz
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: MA, AS, MS; EM, AD, MD, OD. Outside the area, Mediterranean Sea and eastern Atlantic from British Isles south to Angola.
Conservation. Endangered in Turkey (EN). Threats: FIT, HAB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Moronidae – Seabasses

Dicentrarchus labrax (Linnaeus, 1758) – European seabass; Levrek balığı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea and adjacent estuaries. Fresh water, transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from Norway and Iceland south to Senegal.
Conservation. Vulnerable in Turkey (VU). Threats: FIT, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Dicentrarchus punctatus Bloch, 1792 – Spotted seabass; Levrek balığı
Distribution. Aegean Sea and Mediterranean Sea and adjacent estuaries. Fresh water, transitional and marine water. Turkey regions: AS, MS; EM, AD, MD, OD. Outside the area, Mediterranean Sea and eastern Atlantic from English Channel south to Senegal. Immigrated into Gulf of Suez/Red Sea through Suez Canal.
Conservation. Data deficient in Turkey (DD). Threats: FIT, EUT. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Polyprionidae – Wreckfishes

Polyprion americanus (Bloch & Schneider, 1801) – Wreckfish; İskorpit hanisi
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: MA, AS, MS; EM, AD, MD, OD. Outside the area, tropical and temperate waters of Atlantic Ocean including Mediterranean Sea; subantarctic Indian Ocean; New Zealand.
Conservation. Data deficient in Turkey (DD). Threats: FIT, EUT. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action. Listed as data deficient by IUCN since 30 Apr. 2003 (Baillie et al. 2004).

Serranidae – Groupers

Anthias anthias (Linnaeus, 1758) – Swallowtail seaperch; Berber balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Portugal and Azores south to Namibia.
Conservation. Vulnerable in Turkey (VU). Threats: FIT, HAB, EUT. Sensitive to human activities. No keystone species. Probable decline. Medium priority for conservation action.

Epinephelus aeneus (Geoffroy Saint-Hilaire, 1817) – White grouper; Lahoz
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Morocco south to Angola.
Conservation. Endangered in Turkey (EN). Threats: FIT, HAB, EUT. Very sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Proposed for Annexes II and V of the EU Habitats Directive (as *Epinephelus* spp.).

Epinephelus caninus (Valenciennes, 1843) – Dogtooth grouper; Sivridişli orfoz
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Portugal south to Angola.
Conservation. Endangered in Turkey (EN). Threats: FIT, HAB, EUT. Very sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Proposed for Annexes II and V of the EU Habitats Directive (as *Epinephelus* spp.).

Epinephelus costae (Steindachner, 1878) – Goldblotch grouper; Lahoz
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Portugal south to Angola.
Conservation. Endangered in Turkey (EN). Threats: FIT, HAB, EUT. Very sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Proposed for Annexes II and V of the EU Habitats Directive (as *Epinephelus* spp.).

Epinephelus haifensis Ben-Tuvia, 1953 – Haifa grouper; Haifa orfozu, pörtlek
Distribution. Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Portugal south to Angola.
Conservation. Endangered in Turkey (EN). Threats: FIT, HAB, EUT. Very sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Proposed for Annexes II and V of the EU Habitats Directive (as *Epinephelus* spp.).

Epinephelus marginatus (Lowe, 1834) – Dusky grouper; Orfoz
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine water. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from British Isles south to South Africa and around the Cape of Good Hope to Mozambique and Madagascar/Indian Ocean; southern Brazil to Argentina in Southwest Atlantic.
Conservation. Endangered in Turkey (EN). Listed as endangered by IUCN since 30 Apr. 2004 (Baillie et al. 2004). Threats: FIT, HAB, EUT. Very sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Proposed for Annexes II and V of the EU Habitats Directive (as *Epinephelus* spp.).

Mycteroperca rubra (Bloch, 1793) – Mottled grouper; Taş hanisi
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Portugal south to Angola.
Conservation. Endangered in Turkey (EN). Listed as data deficient by IUCN since 1 Aug. 1996 (Baillie et al. 2004). Threats: FIT, HAB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Serranus cabrilla (Linnaeus, 1758) – Comber; Asil hani
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean Sea and eastern Atlantic from the British Isles and Azores to South Africa, and around the Cape of Good Hope to Natal/South Africa.
Conservation. Near threatened in Turkey (NT). Threats: FIT, HAB, EUT. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Serranus hepatus (Linnaeus, 1758) – Brown comber; Benekli hani
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: MA, AS, MS; EM, AD, MD, OD. Outside the area, Mediterranean Sea and eastern Atlantic from Portugal and Canary Islands south to Senegal.
Conservation. Near threatened in Turkey (NT). Threats: FIT, HAB, EUT. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Serranus scriba (Linnaeus, 1758) – Painted comber; Yazili hani
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from Bay of Biscay and Azores south to Mauritania.
Conservation. Near threatened in Turkey (NT). Threats: FIT, HAB, EUT. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Callanthiidae – Splendid perches

Callanthias ruber (Rafinesque-Schmaltz, 1810) – Parrot seaperch; Berber balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from English Channel and Azores south to Mauritania.

Conservation. Data deficient in Turkey (DD). Threats: FIT, HAB, EUT. Sensitive to human activities. No keystone species. Probable decline. Medium priority for conservation action.

Percidae – Perches

Gymnocephalus cernuus (Linnaeus, 1758) – Ruffe

Taxonomy. Recorded from Turkey by Kuru (2004: 16) under the name *Gymnocephalus cernua*.

Distribution. European Black Sea watersheds. Fresh water and transitional water. Turkey region: EB. Outside the area, widespread in northern, western, central and eastern Europe.

Conservation. Least concern in Turkey (LC). Threats: CON. Not sensitive to human activities. No keystone species. Stable populations. Low priority for conservation action.

Perca fluviatilis Linnaeus, 1758 – European perch; Tatlisu levreği balığı

Distribution. Black Sea watersheds and European Mediterranean Sea watersheds. Introduced into a barrage in Aegean Sea watersheds (Innal & Erk'akan 2006). Fresh water and transitional water. Turkey regions: EB, EM, BD; (AD). Outside the area, widespread in northern, western, central and eastern Europe.

Conservation. Least concern in Turkey (LC). Threats: CON, ABS. Not sensitive to human activities. Keystone species. Stable populations. Low priority for conservation action.

Sander lucioperca (Linnaeus, 1758) – Zander; Sudak balığı

Taxonomy. Synonym: *Stizostedion lucioperca*.

Distribution. European Black Sea watersheds and Balik Gölü (Samsun Province, Anatolian Black Sea watersheds). Widely introduced into other parts of western and central Turkey. Fresh water, transitional water and marine. Turkey regions: EB, BD; (AS, MS; AD, WL, CL, EL, GD). Outside the area, widespread in central and eastern Europe.

Conservation. Least concern in Turkey (LC). In areas where it is native, not sensitive to human activities. No keystone species. No decline. Low priority for conservation action. Where introduced, no conservation scheme, as the species is not native. Fishes of this species should no longer be introduced, but removed from such aquatic habitats when observed or collected.

Centrarchidae – Sunfishes

Lepomis gibbosus (Linnaeus, 1758) – Pumpkinseed

Distribution. Introduced into European Mediterranean Sea watersheds (Innal & Erk'akan 2006). First introduced in 1982. Fresh water and transitional water. Not native to Turkey. Turkey region: (EM). Outside the area, originally eastern North America. Widely introduced.

Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Apogonidae – Cardinal fishes

Apogon imberbis (Linnaeus, 1758) – Cardinal fish; Kardinal balığı

Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Portugal and Azores south to Gulf of Guinea.

Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT. Sensitive to human activities. Keystone species. Significant/regional decline. Medium priority for conservation action.

Apogon pharaonis Bellotti, 1874 – Pharao cardinalfish; Kardinal balığı

Taxonomy. This species has been confused with *Apogon nigripinnis* Cuvier, 1828, a species which did not immigrate into the Mediterranean Sea.

Distribution. Aegean Sea, Mediterranean Sea. Lessepsian immigrant into Mediterranean through the Suez Canal; not native to Turkey. Recently recorded from Datça Peninsula, southern Aegean Sea (Okuş et al. 2004). Marine species. Turkey regions: (AS, MS). Outside the area, northern Red Sea.

Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Apogon queketti Gilchrist, 1903 – Spotfin cardinal; Kardinal balığı

Distribution. Mediterranean Sea. Lessepsian immigrant into Mediterranean through the Suez Canal; not native to Turkey. Recently recorded from the Bay of Iskenderun by Eryilmaz & Dalyan (2006). Marine species. Turkey region: (MS). Outside the area, Red Sea and Arabian Sea; southern Mozambique and northeastern South Africa.

Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Epigonidae – Deepwater cardinalfishes

Epigonus denticulatus Dieuzeide, 1950 – Pencil cardinal; Küçük kardinal balığı

Distribution. Aegean Sea. Probably also in Turkish part of Mediterranean Sea; data deficient. Marine species. Turkey region: AS. Outside the area, cosmopolitan in tropical and temperate oceans.

Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Epigonus telescopus (Risso, 1810) – Black bulls-eye; Küçük kardinal balığı

Distribution. Aegean Sea. Probably also in Turkish part of Mediterranean Sea; data deficient. Marine species. Turkey region: AS. Outside the area, Mediterranean Sea, tropical and temperate eastern Atlantic straying to Northwest Atlantic; southern Indian Ocean east to New Zealand.

Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Microichthys coccoi Rüppell, 1852 – Cocco's bulls-eye; Derinsu kardinal balığı

Distribution. Aegean Sea. Probably also in Turkish part of Mediterranean Sea; data deficient. Marine species. Turkey region: AS. Endemic to Mediterranean Sea.

Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT. Local importance. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Sillaginidae – Sillagos

Sillago sihama (Forsskål in Niebuhr, 1775) – Silver sillago; Sivriburunlu gümüş balığı

Distribution. Aegean Sea and Mediterranean Sea. Lessepsian immigrant into Mediterranean through the Suez Canal; not native to Turkey. Marine species. Turkey regions: (AS, MS). Outside the area, Indo-West Pacific from Red Sea, East and South Africa east to Philippines and Solomon Islands, north to Korea and southern Japan, south to Exmouth Gulf/Western Australia and Queensland/Australia.

Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Pomatomidae – Bluefishes

Pomatomus saltatrix (Linné, 1766) – Bluefish; Lüfer
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, worldwide in tropical and temperate waters except for southeastern and northwestern Pacific.
Conservation. Threatened migrant in Turkey (TM). Threats: FIB. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Coryphaenidae – Dolphinfishes

Coryphaena hippurus (Linnaeus, 1758) – Common dolphinfish; Lambuga
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, worldwide in tropical and temperate oceans.
Conservation. Threatened migrant in Turkey (TM). Threats: FIT, FIB, EUT. Sensitive to human activities. Keystone species. Significant decline. Low priority for conservation action. Highly migratory species, listed on Annex I of the 1982 Convention on the Law of the Sea (Anonymus 1994).

Echeneidae – Remoras

Echeneis naucrates Linnaeus, 1758 – Live sharksucker; Vantuz balığı
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine water. Turkey regions: MA, AS, MS. Outside the area, circumglobal in tropical and temperate oceans.
Conservation. Endangered in Turkey (EN). Threats: HOS. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Remora australis (Bennett, 1840) – Whalesucker; Vantuz balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, circumglobal in tropical and temperate oceans.
Conservation. Critically endangered in Turkey (CR), due to massive decline of host species. Threats: HOS. Very sensitive to human activities. No keystone species. Severe decline. High priority for conservation action. Proposed for Annex IV of the EU Habitats Directive.

Remora remora (Linnaeus, 1758) – Common remora; Vantuz balığı
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Recorded from Koycegiz Lagoon/Dalyan River system by Akin et al. (2005: 676). Transitional and marine water. Turkey regions: MA, AS, MS; AD, MD. Outside the area, circumglobal in tropical and temperate oceans.
Conservation. Data deficient in Turkey (DD). Threats: HOS. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Carangidae – Jacks and pompanos

Alectis alexandrinus (Geoffroy Saint-Hilaire, 1817) – African threadfish; İskender balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Morocco south to Angola.
Conservation. Data deficient in Turkey (DD). Threats: FIT, EUT. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Alepes djedaba (Forsskål in Niebuhr, 1775) – Shrimp scad; Çatal balığı
Distribution. Aegean Sea and Mediterranean Sea. Lessepsian immigrant into Mediterranean through the Suez Canal; not native to Turkey. Marine species. Turkey regions: (AS, MS). Outside the area, Red Sea and East Africa east to Hawaiian Islands.

Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Campogramma glaycos (Lacepède, 1801) – Vadigo; Çiplak
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from British Isles south to Senegal.
Conservation. Data deficient in Turkey (DD). Threats: FIT, EUT. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Caranx crysos (Mitchill, 1815) – Blue runner; Kral balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and tropical and warm temperate Atlantic Ocean.
Conservation. Data deficient in Turkey (DD). Threats: FIT, EUT. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Caranx rhonchus Geoffroy Saint-Hilaire, 1817 – False scad; Kral balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Morocco south to Namibia.
Conservation. Data deficient in Turkey (DD). Threats: FIT, EUT. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Caranx sp. – Mediterranean crevalle jack; Kral balığı
Taxonomy. All previous records of *C. hippos* (non Linné, 1766) from the Mediterranean are probably erroneous and based on an undescribed species (W. F. Smith-Vaniz, personal communication, 25 Oct. 2005). The *C. hippos* complex is currently being revised.
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and tropical and warm temperate Atlantic Ocean.
Conservation. Data deficient in Turkey (DD). Threats: FIT, EUT. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Lichia amia (Linnaeus, 1758) – Leerfish; Akya, avcı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Recorded from Koycegiz Lagoon/Dalyan River system by Akin et al. (2005: 676). Transitional and marine water. Turkey regions: BS, MA, AS, MS; AD, MD. Outside the area, Mediterranean Sea and eastern Atlantic from Bay of Biscay to South Africa, and around the Cape of Good Hope of southern Mozambique.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Naucrates ductor (Linnaeus, 1758) – Pilotfish; Malta palamudu, klavuz balığı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, circumglobal in tropical and warm temperate oceans.
Conservation. Vulnerable in Turkey (VU). Threats: EUT, HOS. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Pseudocaranx dentex (Bloch & Schneider, 1801) – White trevally; Kral balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea; tropical and warm temperate waters of Atlantic Ocean; South Africa; warm temperate waters of Southwest Pacific.
Conservation. Data deficient in Turkey (DD). Threats: FIT, EUT. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Seriola dumerili (Risso, 1810) – Greater amberjack; Sarıkuyruk, kuzu balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, circumglobal in tropical and warm temperate oceans.

Conservation. Data deficient in Turkey (DD). Threats: FIT, EUT. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Trachinotus ovatus (Linnaeus, 1758) – Derbio; Çiplak, yaladerma
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from southern Norway south to Angola.
Conservation. Data deficient in Turkey (DD). Threats: FIT, EUT. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Trachurus mediterraneus (Steindachner, 1868) – Mediterranean horse mackerel; Sarıkuyruk istavrit
Taxonomy. Treated as a valid subspecies of *Trachurus mediterraneus* by Smith-Vaniz et al. (1990: 752).
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Bay of Biscay south to Mauritania. Replaced in Black Sea/Kara Deniz and Sea of Marmara by *T. ponticus*.
Conservation. Data deficient in Turkey (DD). Threats: FIT, EUT. Sensitive to human activities. Keystone species. Decline unknown. Medium priority for conservation action.

Trachurus picturatus (Bowdich, 1825) – Blue jack mackerel; Derinsu istavridi
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Bay of Biscay south to Mauritania; Tristan da Cunha and Gough islands.
Conservation. Data deficient in Turkey (DD). Threats: FIT, EUT. Sensitive to human activities. Keystone species. Decline unknown. Medium priority for conservation action.

Trachurus ponticus Aleev, 1956 – Black Sea horse mackerel; İstavrit
Taxonomy. Treated as a valid subspecies of *Trachurus mediterraneus* by Smith-Vaniz et al. (1990: 752).
Distribution. Black Sea and Sea of Marmara. Transitional water species. Turkey regions: BS, MA. Endemic to Black Sea.
Conservation. Data deficient in Turkey (DD). Threats: FIT, EUT. Sensitive to human activities. Keystone species. Probable decline. Medium priority for conservation action.

Trachurus trachurus (Linnaeus, 1758) – Atlantic horse mackerel; Karagöz istavrit
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, in tropical and temperate waters of Atlantic Ocean and Indo-West Pacific.
Conservation. Data deficient in Turkey (DD). Threats: FIT, EUT. Sensitive to human activities. Keystone species. Decline unknown. Medium priority for conservation action.

Leiognathidae – Ponyfishes

Leiognathus klunzingeri (Steindachner, 1898) – Klunzinger's ponyfish; Eksi balığı, çitçit
Distribution. Aegean Sea and Mediterranean Sea. Lessepsian immigrant into Mediterranean through the Suez Canal; not native to Turkey. Marine species. Turkey regions: (AS, MS). Outside the area, Red Sea.
Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Bramidae – Pomfrets

Brama brama (Bonnaterre, 1788) – Atlantic pomfret; Baltabaş balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea; also in tropical and temperate waters of North Atlantic, Southeast Atlantic, Indian Ocean and South Pacific.
Conservation. Data deficient in Turkey (DD). Threats: FIB, EUT. Sensitivity to human ac-

tivities unknown. No keystone species. Decline unknown. Low priority for conservation action. Highly migratory species, listed on Annex I of the 1982 Convention on the Law of the Sea (Anonymus 1994).

Lobotidae – Tripletails

Lobotes surinamensis (Bloch, 1790) – Atlantic tripletail; Üçkuyruk balığı

Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea; tropical and warm temperate waters of Atlantic Ocean; southern Japan; New Caledonia to Tuvalu.

Conservation. Data deficient in Turkey (DD). Threats: FIB, EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Haemulidae – Grunts

Pomadasys incisus (Bowdich, 1825) – Bastard grunt; Yalanci isparoz, gargur

Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Straits of Gibraltar south to Angola.

Conservation. Data deficient in Turkey (DD). Threats: FIT, FIB, HAB, EUT. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Sparidae – Porgies

Boops boops (Linnaeus, 1758) – Bogue; Kupez, lopa

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Recorded from Koycegiz Lagoon/Dalyan River system by Akin et al. (2005: 676). Transitional and marine water. Turkey regions: BS, MA, AS, MS; AD, MD. Outside the area, Mediterranean and Black seas and eastern Atlantic from Norway south to Angola.

Conservation. Least concern in Turkey (LC). Threats: FIT. Not sensitive to human activities. Keystone species. Stable populations. Low priority for conservation action.

Dentex dentex (Linnaeus, 1758) – Common dentex; Sinarit

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean Sea and eastern Atlantic from British Isles south to Mauritania.

Conservation. Vulnerable in Turkey (VU). Threats: FIT, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Dentex gibbosus (Rafinesque-Schmaltz, 1810) – Pink dentex; Trança

Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: MA, AS, MS; AD, MD. Outside the area, Mediterranean Sea and eastern Atlantic from Portugal to Angola.

Conservation. Vulnerable in Turkey (VU). Threats: FIT, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Dentex macrophthalmus (Bloch, 1791) – Large-eye dentex; Patlakgöz mercan

Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Portugal south to Namibia.

Conservation. Vulnerable in Turkey (VU). Threats: FIT, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Dentex maroccanus Valenciennes in Cuvier & Valenciennes, 1830 – Morocco dentex; Fas mercani

Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Bay of Biscay south to Gulf of Guinea.

Conservation. Vulnerable in Turkey (VU). Threats: FIT, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Diplodus annularis (Linnaeus, 1758) – Annular seabream; İsparoz, İspari

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Recorded from Koycegiz Lagoon/Dalyan River system by Akin et al. (2005: 676). Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from Bay of Biscay south to Portugal.

Conservation. Least concern in Turkey (LC). Threats: FIT, EUT. Not sensitive to human activities. Keystone species. Stable populations. Low priority for conservation action.

Diplodus cervinus (Lowe, 1838) – Zebra seabream; Çizgili isparoz

Taxonomy. Treated as a valid subspecies of *Diplodus cervinus* by authors.

Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Bay of Biscay to Canary Islands.

Conservation. Endangered in Turkey (EN). Threats: FIT, HAB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Diplodus puntazzo (Cetti, 1777) – Sharpsnout seabream; Sivriburun isparoz

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from Bay of Biscay south to Sierra Leone and Cape Verde Islands; South Africa.

Conservation. Vulnerable in Turkey (VU). Threats: FIT, EUT. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Diplodus sargus (Linnaeus, 1758) – White seabream; Sargoz

Taxonomy. Treated as valid subspecies of *D. sargus* by Carpenter et al. (1997: 182).

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Recorded from Koycegiz Lagoon/Dalyan River system by Akin et al. (2005: 676). Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Endemic to Mediterranean and Black Sea.

Conservation. Least concern in Turkey (LC). Threats: FIT, EUT. Local importance. Not sensitive to human activities. Keystone species. Significant/regional decline. Medium priority for conservation action.

Diplodus vulgaris (Geoffroy Saint-Hilaire, 1817) – Common two-banded seabream; Karagöz

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Recorded from Koycegiz Lagoon/Dalyan River system by Akin et al. (2005: 676). Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from Bay of Biscay south to Cape Verde Islands; Angola to South Africa.

Conservation. Near threatened in Turkey (NT). Threats: FIT, EUT. Sensitive to human activities. Keystone species. Significant/regional decline. Medium priority for conservation action.

Lithognathus mormyrus (Linnaeus, 1758) – Striped seabream; Mirmir

Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Recorded from Koycegiz Lagoon/Dalyan River system by Akin et al. (2005: 676). Transitional and marine water. Turkey regions: MA, AS, MS; AD, MD. Outside the area, Mediterranean Sea and

eastern Atlantic from Bay of Biscay south to South Africa; Indian Ocean from southern Mozambique to South Africa; Red Sea.

Conservation. Vulnerable in Turkey (VU). Threats: FIT, HAB, EUT. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Oblada melanura (Linnaeus, 1758) – Saddled seabream; Melanur

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from Bay of Biscay south to Angola.

Conservation. Near threatened in Turkey (NT). Threats: FIT, EUT. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Pagellus acarne (Risso, 1827) – Axillary seabream; Yabani mercan

Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Recorded from Koycegiz Lagoon/Dalyan River system by Akin et al. (2005: 676). Transitional and marine water. Turkey regions: MA, AS, MS; AD, MD. Outside the area, Mediterranean Sea and eastern Atlantic from North Sea south to Cape Verde Islands.

Conservation. Vulnerable in Turkey (VU). Threats: FIT, EUT. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Pagellus bogaraveo (Brünnich, 1768) – Blackspot seabream; Mandagöz mercan

Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Norway and Iceland south to Mauritania.

Conservation. Vulnerable in Turkey (VU). Threats: FIT, EUT. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Pagellus erythrinus (Linnaeus, 1758) – Common pandora; Kirma mercan

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from Norway south to Guinea-Bissau.

Conservation. Vulnerable in Turkey (VU). Threats: FIT, EUT. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Pagrus auriga Valenciennes, 1843 – Red-banded seabream; Çizgili mercan

Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Portugal south to Angola.

Conservation. Vulnerable in Turkey (VU). Threats: FIT, EUT. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Pagrus caeruleostictus (Valenciennes in Cuvier & Valenciennes, 1830) – Bluespotted seabream; Antenli mercan, yalanci trança

Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Portugal south to Angola.

Conservation. Vulnerable in Turkey (VU). Threats: FIT, EUT. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Pagrus pagrus (Linnaeus, 1758) – Common seabream; Fangri
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and tropical and warm temperate coastal waters of the Atlantic Ocean.
Conservation. Endangered in Turkey (EN). Listed as endangered by IUCN since 1 Aug. 1996 (Baillie et al. 2004). Threats: FIT, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Sarpa salpa (Linnaeus, 1758) – Salema; Salpa
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Recorded from Koycegiz Lagoon/Dalyan River system by Akin et al. (2005: 676). Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean Sea and eastern Atlantic from Bay of Biscay south to South Africa.
Conservation. Near threatened in Turkey (NT). Threats: FIT. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Sparus aurata Linnaeus, 1758 – Gilthead seabream; Çipura
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Recorded from Koycegiz Lagoon/Dalyan River system by Akin et al. (2005: 676). Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from British Isles south to Cape Verde Islands.
Conservation. Vulnerable in Turkey (VU). Threats: FIT, EUT, AQU. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Spondyliosoma cantharus (Linnaeus, 1758) – Black seabream; İskatari, firtina balığı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from Norway south to Namibia.
Conservation. Near threatened in Turkey (NT). Threats: FIT, EUT. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Centracanthidae – Picarels

Centracanthus cirrus Rafinesque-Schmaltz, 1810 – Curled picarel; İstrangiloz
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Portugal south to Mauritania.
Conservation. Vulnerable in Turkey (VU). Threats: FIT, HAB, EUT. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Spicara maena (Linnaeus, 1758) – Blotched picarel; İzmarit, bey azgöz balığı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from Portugal south to Canary Islands.
Conservation. Vulnerable in Turkey (VU). Threats: FIT, EUT. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Spicara smaris (Linnaeus, 1758) – Picarel; İzmarit
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Recorded from Koycegiz Lagoon/Dalyan River system by Akin et al. (2005: 676). Transitional and

marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from Portugal south to Canary Islands.

Conservation. Vulnerable in Turkey (VU). Threats: FIT, EUT. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Sciaenidae – Drums and croakers

Argyrosomus regius (Asso, 1801) – Meagre; Sarıagiz, kötek balığı

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Fresh water, transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from Norway south to Congo. Immigrated into northern Red Sea through Suez Canal.

Conservation. Data deficient in Turkey (DD). Threats: FIT, EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Sciaena umbra Linnaeus, 1758 – Brown meagre; Eskina, kaya levregi

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Fresh water, transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from English Channel south to Senegal, possibly Gabon.

Conservation. Vulnerable in Turkey (VU). Threats: FIT, EUT. Sensitivity to human activities unknown. No keystone species. Significant decline. Medium priority for conservation action. Capture of this species by any method is forbidden in Turkey.

Umbrina cirrosa (Linnaeus, 1758) – Shy drum; Minakop

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Fresh water, transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from Bay of Biscay south to Morocco.

Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Mullidae – Goatfishes

Mullus barbatus Linnaeus, 1758 – Red mullet; Barbun

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Recorded from Koycegiz Lagoon/Dalyan River system by Akin et al. (2005: 676). Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from southern Norway south to Azores and Senegal.

Conservation. Near threatened in Turkey (NT). Threats: FIT, HAB, EUT. Sensitive to human activities. Keystone species. Significant/regional decline. Medium priority for conservation action.

Mullus surmuletus Linnaeus, 1758 – Striped red mullet; Tekir

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from Norway south to Azores and Senegal.

Conservation. Near threatened in Turkey (NT). Threats: FIT, HAB, EUT. Sensitive to human activities. Keystone species. Significant/regional decline. Medium priority for conservation action.

Parupeneus forsskali (Fourmanoir & Guézé, 1976) – Red Sea goatfish
Distribution. Mediterranean Sea. Recorded from Turkey by ÇINAR et al. (2006: 88–89, fig. 10). Lessepsian immigrant into Mediterranean through the Suez Canal; not native to Turkey. Marine species. Turkey regions: (AS, MS). Outside the area, Red Sea, Gulf of Aden and Sokotra.
Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Upeneus moluccensis (Bleeker, 1855) – Goldband goatfish; Paşa barbunu
Distribution. Aegean Sea and Mediterranean Sea. Lessepsian immigrant into Mediterranean through the Suez Canal; not native to Turkey. Marine species. Turkey regions: (AS, MS). Outside the area, Indo-West Pacific from Red Sea, East Africa, Madagascar and Réunion east to Caroline Islands and New Guinea, north to southern Japan, south to Kimberleys/Western Australia and Queensland/Australia.
Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Upeneus pori Ben-Tuvia & Golani, 1989 – Por's goatfish; Nil barbunu
Distribution. Mediterranean Sea. Lessepsian immigrant into Mediterranean through the Suez Canal; not native to Turkey. Marine species. Turkey region: (MS). Outside the area, originally Red Sea.
Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Pempheridae – Sweepers

Pempheris vanicolensis Cuvier in Cuvier & Valenciennes, 1831 – Vanikoro sweeper; Üçgen balığı, gölge balığı
Distribution. Aegean Sea and Mediterranean Sea. Lessepsian immigrant into Mediterranean through the Suez Canal; not native to Turkey. Marine species. Turkey regions: (AS, MS). Outside the area, originally Indo-West Pacific from Red Sea and East Africa east to Solomon Islands.
Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Chaetodontidae – Butterflyfishes

Heniochus intermedius Steindachner, 1893 – Red Sea bannerfish
Distribution. Mediterranean Sea. Lessepsian immigrant into Mediterranean through the Suez Canal; not native to Turkey. Marine species. Turkey region: (MS). Outside the area, originally Red Sea and Gulf of Aden.
Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Terapontidae – Terapons

Pelates quadrilineatus (Bloch, 1790) – Four-lined terapon; Ispinoz balığı
Distribution. Mediterranean Sea. Lessepsian immigrant into Mediterranean through the Suez Canal; not native to Turkey. Fresh water, transitional and marine water. Turkey region: (MS). Outside the area, Red Sea and East Africa east to Philippines and New Guinea, north to southern Japan, south to Vanuatu.
Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Cepolidae – Bandfishes

Cepola macrophthalma (Linnaeus, 1758) – Red bandfish; Kurdele balığı
Taxonomy. Frequently used synonym: *Cepola rubescens* Linnaeus, 1764.
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine water. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from British Isles south to Senegal.
Conservation. Vulnerable in Turkey (VU). Threats: FIT, HAB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Cichlidae – Cichlids

Oreochromis aureus (Steindachner, 1864) – Blue tilapia
Taxonomy. Recorded from Turkey by Akin et al. (2005: 673), as *Oreochromis aurea*.
Distribution. Introduced into southern Turkey, Koycegiz Lagoon/Dalyan River system (Akin et al. 2005). Fresh water, transitional and brackish water species. Turkey regions: (MS; MD). Outside the area, originally distributed in Africa and Eurasia (Jordan Valley, Lower Nile, Chad Basin, Benue, middle and upper Niger, Senegal River). Introduced in the oasis of Azraq (Jordan) as well as in warm water ponds of USA, South and Central America and South East Asia.
Conservation. Not evaluated in Turkey (NE). Not native in Turkey. No conservation action advisable; specimens should be removed from Turkish waters if encountered.

Oreochromis niloticus (Steindachner, 1864) – Nile tilapia
Taxonomy. Recorded from Turkey by Akin et al. (2005: 673), as *Oreochromis nilotica*.
Distribution. Introduced into southern Turkey, Koycegiz Lagoon/Dalyan River system (Akin et al. 2005). Fresh water, transitional and brackish water species. Turkey regions: (MS; MD). Outside the area, originally distributed in Africa, coastal rivers of Israel, Nile from below Albert Nile to the delta, Jebel Marra, Lake Chad basin and the rivers Niger, Benue, Volta, Gambia and Senegal.
Conservation. Not evaluated in Turkey (NE). Not native in Turkey. No conservation action advisable; specimens should be removed from Turkish waters if encountered.

Tilapia zillii (Gervais, 1848) – Redbelly tilapia
Taxonomy. Recorded from Turkey by Kuru (2004: 17).
Distribution. Introduced into southern Turkey. Introduced into Koycegiz Lagoon/Dalyan River system (Akin et al. 2005: 676, *Tilapia* spp.). Fresh water species. Turkey region: (MD). Outside the area, originally distributed in northern and eastern Africa and Jordan River system.
Conservation. Not evaluated in Turkey (NE). Not native in Turkey. No conservation action advisable; specimens should be removed from Turkish waters if encountered.

Tristramella simonis Trewavas, 1942 – Simon's tilapia
Taxonomy. Recorded from Turkey by Kuru (2004: 17); record needs verification.
Distribution. Introduced into southern Turkey. Fresh water species. Turkey region: (MD). Outside the area, originally distributed in the Jordan River system.
Conservation. Not evaluated in Turkey (NE). Not native in Turkey. No conservation action advisable; specimens should be removed from Turkish waters if encountered.

Pomacentridae – Damselfishes

Chromis chromis (Linnaeus, 1758) – Damselfish; Papaz balığı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS. Outside the area, Mediterranean and Black seas and eastern Atlantic from Portugal to Gulf of Guinea, possibly Angola, including offshore islands.
Conservation. Near threatened in Turkey (NT). Threats: HAB, EUT. Sensitivity to human

activities unknown. Keystone species. Significant/regional decline. Low priority for conservation action.

Labridae – Wrasses

Acantholabrus palloni (Risso, 1810) – Scale-rayed wrasse; Derinsu lapini
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Norway south to Gabon.
Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Coris julis (Linnaeus, 1758) – Mediterranean rainbow wrasse; Gelin balığı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Norway south to Gabon.
Conservation. Near threatened in Turkey (NT). Threats: FIT, HAB, EUT. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Ctenolabrus rupestris (Linnaeus, 1758) – Goldsinny wrasse; Çirçir, otbalığı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS. Outside the area, Mediterranean and Black seas and eastern Atlantic from Norway south to Morocco.
Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Labrus bergylta Ascanius, 1767 – Ballan wrasse; Kikla
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Norway south to Morocco.
Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Labrus merula Linnaeus, 1758 – Brown wrasse; Kahverengi lapin
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Portugal to Morocco and Azores.
Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Labrus mixtus Linnaeus, 1758 – Cuckoo wrasse; Lapin
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Norway south to Senegal, Azores and Madeira.
Conservation. Endangered in Turkey (EN). Threats: FIB, HAB, EUT. Rare. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive.

Labrus viridis Linnaeus, 1758 – European green wrasse; Lapin, otbalığı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS. Outside the area, Mediterranean and Black seas and eastern Atlantic from Portugal south to Morocco.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT. Local importance. Very sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive.

Pteragogus pelycus Randall, 1981 – Sideburn wrasse; Filamentli lapin
Distribution. Aegean Sea and Mediterranean Sea. Lessepsian immigrant into Mediterranean through the Suez Canal; not native to Turkey. Marine species. Turkey regions: (AS, MS). Outside the area, Red Sea, East and South Africa, Seychelles and Mascarenes.
Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Symphodus cinereus (Bonnaterre, 1788) – Grey wrasse; Gri çirçir, otbalığı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS. Outside the area, Mediterranean and Black seas and eastern Atlantic from Arcachon Lagoon/Bay of Biscay to Gibraltar.
Conservation. Least concern in Turkey (LC). Threats: HAB, EUT. Not sensitive to human activities. Keystone species. Stable populations. Low priority for conservation action.

Symphodus doderleini Jordan, 1890 – Doederlein's wrasse; Çirçir, otbalığı
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: MA, AS, MS. Endemic to Mediterranean Sea.
Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT. Local importance. Sensitive to human activities. No keystone species. Probable decline. Medium priority for conservation action.

Symphodus mediterraneus (Linnaeus, 1758) – Axillary wrasse; Çirçir, otbalığı
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Portugal south to northern Morocco, west to Azores.
Conservation. Least concern in Turkey (LC). Threats: HAB, EUT. Not sensitive to human activities. Keystone species. Stable populations. Low priority for conservation action.

Symphodus melanocercus (Risso, 1810) – Blacktail wrasse; Siyah kuyruklu çirçir, otbalığı
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: MA, AS, MS. Endemic to Mediterranean Sea.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT. Local importance. Sensitive to human activities. No keystone species. Probable decline. Medium priority for conservation action.

Symphodus melops (Linnaeus, 1758) – Corkwing wrasse; Çirçir, otbalığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Norway south to Morocco and Azores.
Conservation. Least concern in Turkey (LC). Threats: HAB, EUT. Not sensitive to human activities. Keystone species. Stable populations. Low priority for conservation action.

Symphodus ocellaris (Linnaeus, 1758) – Mediterranean ocellated wrasse; Benekli çirçir, otbalığı
Taxonomy. *Labrus ocellatus* of Forsskål in Niebuhr, 1775 is a spelling error.
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS. Endemic to Mediterranean and Black seas.
Conservation. Least concern in Turkey (LC). Threats: HAB, EUT. Local importance. Not sensitive to human activities. Keystone species. Stable populations. Medium priority for conservation action.

Symphodus roissali (Risso, 1810) – Five-spotted wrasse; Çirçir, otbalığı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS. Outside the area, Mediterranean and Black seas and eastern Atlantic from Gulf of Gascogne south to Gibraltar.
Conservation. Least concern in Turkey (LC). Threats: HAB, EUT. Not sensitive to human activities. Keystone species. Stable populations. Low priority for conservation action.

Symphodus rostratus (Bloch, 1791) – Pointed-snout wrasse; Sivriburunlu çirçir, otbalığı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS. Endemic to Mediterranean and Black seas.
Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT. Local importance. Sensitive to human activities. No keystone species. Significant/regional decline. Medium priority for conservation action.

Symphodus tinca (Linnaeus, 1758) – East Atlantic peacock wrasse; Çirçir, otbalığı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS. Outside the area, Mediterranean and Black seas and eastern Atlantic from Spain south to Morocco.
Conservation. Least concern in Turkey (LC). Threats: HAB, EUT. Not sensitive to human activities. Keystone species. Stable populations. Low priority for conservation action.

Thalassoma pavo (Linnaeus, 1758) – Ornate wrasse; Günbalığı, aykuyruk
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Portugal south to Gabon.
Conservation. Least concern in Turkey (LC). Threats: HAB, EUT. Not sensitive to human activities. Keystone species. Stable populations. Low priority for conservation action.

Xyrichtys novacula (Linnaeus, 1758) – Pearly razorfish; Ustura balığı
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Recorded from Koycegiz Lagoon/Dalyan River system by Akin et al. (2005: 676). Transitional and marine water. Turkey regions: MA, AS, MS; AD, MD. Outside the area, equatorial and subtropical coastal waters of Atlantic Ocean including offshore islands.
Conservation. Data deficient in Turkey (DD). Threats: FIB, HAB, EUT. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Scaridae – Parrotfishes

Sparisoma cretense (Linnaeus, 1758) – Parrotfish; Iskaroz, papagan balığı
Distribution. Aegean Sea and Mediterranean Sea. Recorded from Koycegiz Lagoon/Dalyan River system by Akin et al. (2005: 676). Transitional and marine water. Turkey regions: AS, MS; AD, MD. Outside the area, Mediterranean Sea and eastern Atlantic from Portugal, Madeira, Azores and Canary Islands south to Senegal.
Conservation. Endangered in Turkey (EN). Threats: FIB, HAB, EUT. Sensitive to human activities. Keystone species. Significant decline. High priority for conservation action. Proposed for Annexes II and V of the EU Habitats Directive.

Ammodytidae – Sand eels

Gymnammodytes cicerelus (Rafinesque-Schmaltz, 1810) – Mediterranean sand eel; Kum balığı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from Portugal south to Angola.
Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT. Sensitive to human activities. Keystone species. Decline unknown. Medium priority for conservation action.

Trachinidae – Weevers

Echiichthys vipera (Cuvier, 1829) – Lesser weever; Varsam
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine

water. Turkey regions: MA, AS, MS; EM, AD, MD, OD. Outside the area, Mediterranean Sea and eastern Atlantic from North Sea south to Morocco and Canary Islands.
Conservation. Near threatened in Turkey (NT). Threats: HAB, EUT. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Trachinus araneus Cuvier (ex Risso) in Cuvier & Valenciennes, 1829 – Spotted weever; Kum trakonyasi
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Recorded from Koycegiz Lagoon/Dalyan River system by Akin et al. (2005: 676). Transitional and marine water. Turkey regions: MA, AS, MS; EM, AD, MD, OD. Outside the area, Mediterranean Sea and eastern Atlantic from Portugal south to Angola.
Conservation. Vulnerable in Turkey (VU). Threats: FIT, HAB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Trachinus draco Linnaeus, 1758 – Greater weever; Trakonya
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from Norway south to Morocco, Madeira and Canary Islands.
Conservation. Vulnerable in Turkey (VU). Threats: FIT, HAB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Trachinus radiatus Cuvier, 1829 – Starry weever; Trakonya
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Gibraltar south to Gulf of Guinea.
Conservation. Vulnerable in Turkey (VU). Threats: FIT, HAB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Uranoscopidae – Stargazers

Uranoscopus scaber Linnaeus, 1758 – Atlantic stargazer; Tiryaki balığı, kurbağa balığı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Recorded from Koycegiz Lagoon/Dalyan River system by Akin et al. (2005: 676). Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from British Isles south to Morocco.
Conservation. Vulnerable in Turkey (VU). Threats: FIT, HAB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Tripterygiidae – Triplefins

Tripterygion melanurus Guichenot, 1850 – Small black-spotted cave triplefin; Karabaş balığı
Taxonomy. Treated as a valid subspecies of *Tripterygion melanurus* Guichenot, 1850 by authors.
Distribution. Mediterranean Sea. Transitional and marine water. Turkey region: MS. Endemic to limestone cave habitats in the southern Mediterranean Sea; Turkish populations possibly isolated from other areas.
Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT. Local importance. Sensitive to human activities. Keystone species. Significant/regional decline. High priority for conservation action.

Tripterygion minor Kolombatović, 1904 – Small red cave triplefin; Karabaş balığı
Taxonomy. Treated as a valid subspecies of *Tripterygion melanurus* (non Guichenot, 1850) by authors.
Distribution. Aegean Sea. Transitional and marine water. Turkey region: AS. Endemic to

limestone cave habitats in the northern Mediterranean Sea; Turkish populations possibly isolated from other areas.

Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT. Local importance. Sensitive to human activities. Keystone species. Significant/regional decline. High priority for conservation action.

Tripterygion tripteronotus (Risso, 1810) – Red-black triplefin; Karabaş balığı

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS. Endemic to Mediterranean and Black seas; replaced in southwestern Mediterranean and adjacent Atlantic by an undescribed sibling species.

Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT. Local importance. Sensitive to human activities. Keystone species. Decline unknown. High priority for conservation action.

Tripterygion xanthosoma Zander & Heymer, 1970 – Mediterranean yellow-black triplefin; Karabaş balığı

Taxonomy. Treated as a subspecies of *Tripterygion delaisi* Cadenat & Blache, 1970 by authors.

Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Endemic to Mediterranean Sea.

Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT. Local importance. Sensitive to human activities. Keystone species. Significant/regional decline. High priority for conservation action.

Blenniidae – Blennies

Aidablennius sphynx (Valenciennes in Cuvier & Valenciennes, 1836) – Sphinx blenny; Horozbina balığı

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS. Endemic to Black Sea, Mediterranean Sea and adjacent coast of Morocco.

Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT. Local importance. Sensitive to human activities. No keystone species. Significant/regional decline. Medium priority for conservation action.

Blennius ocellaris Linnaeus, 1758 – Butterfly blenny; Horozbina balığı

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from English Channel to Morocco.

Conservation. Endangered in Turkey (EN). Threats: FIT, HAB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Coryphoblennius galerita (Linnaeus, 1758) – Montagu's blenny; Horozbina balığı

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from southern Ireland and English Channel south to Guinea, west to Azores.

Conservation. Near threatened in Turkey (NT). Threats: HAB, EUT. Sensitivity to human activities unknown. Keystone species. Significant/regional decline. Low priority for conservation action.

Lipophrys adriaticus (Steindachner & Kolombatović, 1883) – Adriatic blenny; Horozbina balığı

Distribution. Black Sea, Sea of Marmara and Aegean Sea. Transitional and marine water. Turkey regions: BS, MA, AS. Endemic to Adriatic Sea, Black Sea, Sea of Marmara and Aegean Sea; eastern populations isolated.

Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT. Local importance. Sen-

sitive to human activities. No keystone species. Decline unknown. Medium priority for conservation action.

Lipophrys canevae (Vinciguerra, 1880) – Yellowcheek blenny; Horozbina balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Endemic to Mediterranean Sea and adjacent southern Portugal.
Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT. Local importance. Sensitive to human activities. No keystone species. Decline unknown. Medium priority for conservation action.

Lipophrys dalmatinus (Steindachner & Kolombatović, 1883) – Dalmatian blenny; Horozbina balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Endemic to Mediterranean Sea and adjacent southern Portugal.
Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT. Local importance. Sensitive to human activities. No keystone species. Decline unknown. Medium priority for conservation action.

Lipophrys nigriceps (Vinciguerra, 1883) – Black-headed blenny; Horozbina balığı
Distribution. Aegean Sea. Transitional and marine water. Turkey region: AS. Endemic to Mediterranean Sea.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT. Local importance. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive.

Parablennius gattorugine (Linnaeus, 1758) – Tompot blenny; Horozbina balığı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from North Sea south to Morocco.
Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT. Sensitive to human activities. Keystone species. Decline unknown. Medium priority for conservation action.

Parablennius incognitus (Bath, 1968) – Pygmy blenny; Horozbina balığı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Galicia/Spain south to Morocco and Canary Islands.
Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT. Sensitive to human activities. Keystone species. Decline unknown. Medium priority for conservation action.

Parablennius rouxi (Cocco, 1833) – Striped blenny; Şeritli horozbina
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Endemic to northern Mediterranean and adjacent southern Portugal.
Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT. Local importance. Sensitive to human activities. No keystone species. Decline unknown. Medium priority for conservation action.

Parablennius sanguinolentus (Pallas, 1814) – Rusty blenny; Horozbina balığı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Bay of Biscay south to northern Morocco.
Conservation. Least concern in Turkey (LC). Threats: HAB, EUT. Sensitivity to human activities unknown. Keystone species. Decline unknown. Low priority for conservation action.

Parablennius tentacularis (Brünnich, 1768) – Tentacled blenny; Horozbina balığı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Bay of Biscay south to Senegal including Canary Islands.

Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT. Sensitive to human activities. Keystone species. Decline unknown. Medium priority for conservation action.

Parablennius zvonimiri (Kolombatović, 1892) – Red blenny; Horozbina balığı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS. Endemic to Mediterranean and Black seas.
Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT. Local importance. Sensitive to human activities. No keystone species. Decline unknown. Medium priority for conservation action.

Paralipophrys trigloides (Valenciennes in Cuvier & Valenciennes, 1836) – Bullhead blenny; Horozbina balığı
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Bretagne/France south to Senegal, including Madeira and Canary Islands.
Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT. Sensitive to human activities. Keystone species. Decline unknown. Medium priority for conservation action.

Petroscirtes ancylodon Rüppell, 1835 – Arabian fangblenny; Horozbina balığı
Distribution. Mediterranean Sea. Lessepsian immigrant into Mediterranean through the Suez Canal; not native to Turkey. Marine species. Turkey region: (MS). Outside the area, Red Sea and Persian/Arabian Gulf.
Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Salaria basilisca (Valenciennes in Cuvier & Valenciennes, 1836) – Basilisk blenny; Horozbina balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Endemic to Mediterranean Sea.
Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT. Local importance. Sensitive to human activities. No keystone species. Decline unknown. Medium priority for conservation action.

Salaria fluviatilis (Asso, 1801) – Freshwater blenny; Horozbina balığı
Taxonomy. Synonyms: *Blennius vulgaris* Pollini, 1816; *Salarias varus* Risso, 1826; *Blennius lupulus* Bonaparte, 1840.
Distribution. Watersheds into Aegean Sea and Mediterranean Sea including marine waters adjacent to estuaries. Recorded from Lake İznik by Özuluğ et al. (2005: 373). Fresh water, transitional water and marine. Turkey regions: AS, MS; EM, AD, MD, OD, WL. Endemic to watersheds into Mediterranean Sea and Portugal.
Conservation. Near threatened in Turkey (NT). Threats: HAB, EUT, CON, ABS. Local importance. Sensitive to human activities. Keystone species. Significant/regional decline. High priority for conservation action.

Salaria pavo (Risso, 1810) – Peacock blenny; Horozbina balığı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea including adjacent estuaries. Fresh water, transitional water and marine. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from France south to Morocco. Immigrated into Suez Canal.
Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT. Sensitive to human activities. No keystone species. Decline unknown. Medium priority for conservation action.

Scartella cristata (Linnaeus, 1758) – Molly Miller; Horozbina balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean, eastern Atlantic from Bay of Biscay south to Congo including Canary Islands, and western Atlantic from Florida and Bermuda south to Brazil.
Conservation. Near threatened in Turkey (NT). Threats: HAB, EUT. Sensitivity to human

activities unknown. No keystone species. Significant/regional decline. Medium priority for conservation action.

Clinidae – Clinids

Clinitrachus argentatus (Risso, 1810) – Cline; Ari balığı
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Portugal south to Morocco.
Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Gobiesocidae – Clingfishes

Apletodon dentatus (Facciolà, 1887) – Small-headed clingfish; Ördek balığı
Distribution. Sea of Marmara. Probably also Aegean Sea and Turkish part of Mediterranean Sea; data deficient. Marine species. Turkey region: MA. Outside the area, Mediterranean Sea and northeastern Atlantic from British Isles to Portugal.
Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT. Rare. Sensitive to human activities. No keystone species. Decline unknown. Medium priority for conservation action.

Diplecogaster bimaculata (Bonnaterre, 1788) – Two-spotted clingfish; Ördek balığı
Taxonomy. Synonym: *Diplecogaster bimaculata euxinica* Murgoci, 1964.
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and northeastern Atlantic from Norway and Faroes south to Gibraltar.
Conservation. Least concern in Turkey (LC). Threats: HAB, EUT. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Gouania wildenowi (Risso, 1810) – Blunt-snouted clingfish; Ördek balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Endemic to Mediterranean Sea.
Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT. Local importance. Sensitive to human activities. No keystone species. Decline unknown. Medium priority for conservation action.

Lepadogaster candolii Risso, 1810 – Connemarra clingfish; Ördek balığı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and northeastern Atlantic from British Isles to Canary Islands.
Conservation. Least concern in Turkey (LC). Threats: HAB, EUT. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Lepadogaster lepadogaster (Bonnaterre, 1788) – Shore clingfish; Ördek balığı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas, Madeira and Canary Islands.
Conservation. Least concern in Turkey (LC). Threats: HAB, EUT. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Opeatogenys gracilis (Canestrini, 1864) – Pygmy clingfish, seagrass clingfish
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and adjacent northeastern Atlantic (Portugal). – **New record** from Turkey, based on four specimens (0.8–1.7 cm standard length) from *Posidonia oceanica* meadows in the Aegean Sea (6.VII.1995, Edremit Bay/Balıkesir;

17.VII.1995, Foça/İzmir) and Mediterranean Sea (21.IX.2005, Bozyazı/Mersin; 24.IX.2005, Kaledran/Antalya); photographs available to the authors.

Conservation. Data deficient in Turkey (DD). Due to its strict dependence on seagrass beds, and overall decline of these beds as a result of anthropogenic action and seaweed infestations, *O. gracilis* was suggested as a candidate for IUCN Red List of Threatened Species (Gonçalves et al. 2005). Threats: HAB, EUT. Sensitive to human activities. No keystone species. Decline unknown. Medium priority for conservation action.

Callionymidae – Dragonets

Callionymus fasciatus Valenciennes in Cuvier & Valenciennes, 1837 – Banded dragonet; Üzgün balığı

Distribution. Black Sea, Sea of Marmara and Aegean Sea. Transitional and marine water. Turkey regions: BS, MA, AS. Endemic to northern Mediterranean and Black seas. Black Sea to Aegean Sea populations isolated from others.

Conservation. Critically endangered in Turkey (CR). Threats: FIB, HAB, EUT. Local importance. Rare. Very sensitive to human activities. No keystone species. Severe decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive, as a prioritary species.

Callionymus filamentosus Valenciennes in Cuvier & Valenciennes, 1837 – Common filamentous dragonet; Üzgün balığı

Distribution. Mediterranean Sea. Lessepsian immigrant into Mediterranean through the Suez Canal; not native to Turkey. Marine species. Turkey region: (MS). Outside the area, Indo-West Pacific.

Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Callionymus lyra Linnaeus, 1758 – Common dragonet; Üzgün balığı

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS. Outside the area, northern Mediterranean and Black seas and eastern Atlantic from Iceland and Norway south to Mauritania and Azores.

Conservation. Endangered in Turkey (EN). Threats: FIB, HAB, EUT, LES. Very sensitive to human activities. No keystone species. Significant/regional decline. Medium priority for conservation action.

Callionymus maculatus Rafinesque-Schmaltz, 1810 – Spotted dragonet; Üzgün balığı

Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Iceland and Norway south to Senegal.

Conservation. Endangered in Turkey (EN). Threats: FIB, HAB, EUT, LES. Very sensitive to human activities. Keystone species. Significant/regional decline. Medium priority for conservation action.

Callionymus pusillus Delaroche, 1809 – Sailfin dragonet; Üzgün balığı

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS. Endemic to Black Sea, Mediterranean Sea and adjacent coast of southern Portugal.

Conservation. Endangered in Turkey (EN). Threats: FIB, HAB, EUT, LES. Local importance. Sensitive to human activities. Keystone species. Probable decline. High priority for conservation action.

Callionymus risso LeSueur, 1814 – Risso's dragonet; Üzgün balığı

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS. Endemic to Black Sea, Mediterranean Sea and adjacent coast of southern Portugal.

Conservation. Endangered in Turkey (EN). Threats: FIB, HAB, EUT, LES. Local impor-

tance. Sensitive to human activities. No keystone species. Significant/regional decline. Medium priority for conservation action.

Synchiropus phaeton (Günther, 1861) – Phaeton dragonet; Üzgün balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Azores and Portugal south to Gambia.
Conservation. Vulnerable in Turkey (VU). Threats: FIB, HAB, EUT. Sensitive to human activities. Keystone species. Significant/regional decline. Medium priority for conservation action.

Gobiidae – Gobies

Aphia minuta (Risso, 1810) – Transparent goby; Beyaz kayabalığı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from Norway south to Morocco.
Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT. Sensitivity to human activities unknown. Keystone species. Decline unknown. Low priority for conservation action.

Chromogobius quadrivittatus (Steindachner, 1863) – Chestnut goby; Kayabalığı
Distribution. Sea of Marmara and Aegean Sea. Probably also in Turkish part of Mediterranean Sea; data deficient. Marine water. Turkey regions: MA, AS. Endemic to Mediterranean Sea.
Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT. Local importance. Sensitive to human activities. No keystone species. Decline unknown. Medium priority for conservation action.

Chromogobius zebratus (Kolombatović, 1891) – Kolombatovic's goby; Kayabalığı
Distribution. Aegean Sea. **New record** (based on SMNS 25307 from Torba, Güllük Körfezi, Muğla Province). Probably also in Turkish part of Mediterranean Sea; data deficient. Marine species. Turkey region: AS. Endemic to northeastern Mediterranean Sea from Italy to Israel.
Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT. Local importance. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Crystallogobius linearis (Düben, 1845) – Crystal goby; Kayabalığı
Distribution. Aegean Sea. Probably also in Turkish part of Mediterranean Sea; data deficient. Transitional and marine water. Turkey region: AS. Outside the area, Mediterranean Sea and eastern Atlantic from Norway south to Gibraltar.
Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT. Sensitivity to human activities unknown. Keystone species. Decline unknown. Low priority for conservation action.

Deltentosteus collonianus (Risso, 1820) – Toothed goby; Kayabalığı
Distribution. Mediterranean Sea. Probably also in Aegean Sea; data deficient. Marine species. Turkey region: MS. Outside the area, Mediterranean Sea and southwestern Portugal.
Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT. Local importance. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Deltentosteus quadrimaculatus (Valenciennes in Cuvier & Valenciennes, 1837) – Four-spotted goby; Dört benekli kayabalığı
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine

water. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Bay of Biscay south to Western Sahara.

Conservation. Vulnerable in Turkey (VU). Threats: FIT, HAB, EUT. Sensitive to human activities. Keystone species. Significant/regional decline. Medium priority for conservation action.

Gobius auratus Risso, 1810 – Golden goby; Kayabalığı

Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from northern Spain south to Madeira and Canary Islands.

Conservation. Endangered in Turkey (EN). Threats: HAB, EUT. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Gobius bucchichi Steindachner, 1870 – Bucchich's goby; Küçük kayabalığı

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS. Outside the area, Mediterranean and Black seas and Portugal in eastern Atlantic.

Conservation. Least concern in Turkey (LC). Threats: EUT. Not sensitive to human activities. Keystone species. Stable populations. Low priority for conservation action.

Gobius cobitis Pallas, 1814 – Giant goby; Büyük kayabalığı

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea and adjacent estuaries. Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from southern England south to Morocco. Immigrated into Gulf of Suez/Red Sea through Suez Canal.

Conservation. Near threatened in Turkey (NT). Threats: HAB, EUT. Sensitivity to human activities unknown. No keystone species. Significant/regional decline. Low priority for conservation action.

Gobius cruentatus Gmelin, 1789 – Red-mouthed goby; Kirmizi dudakli kayabalığı

Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Ireland south to Senegal.

Conservation. Endangered in Turkey (EN). Threats: FIT, HAB, EUT. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Gobius fallax Sarato, 1889 – Sarato's goby

Distribution. Aegean Sea, Mediterranean Sea. **New record** from Turkey; scuba diving observations revealed its presence at Cape Akıncı/İskenderun Bay (eastern Mediterranean Sea), and Ildırı Bay/Çeşme (Aegean Sea). Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and Canary Islands.

Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Gobius geniporus Valenciennes in Cuvier & Valenciennes, 1837 – Slender goby; Ince kayabalığı

Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Endemic to Mediterranean Sea.

Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT. Local importance. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Gobius niger Linnaeus, 1758 – Black goby; Kömürcü kayabalığı

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea and adjacent estuaries. Transitional and marine water. Turkey regions: BS, MA, AS, MS; EB, EM, AD,

MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from Norway and Baltic Sea south to Mauritania.
Conservation. Least concern in Turkey (LC). Threats: HAB, EUT. Not sensitive to human activities. Keystone species. Stable populations. Low priority for conservation action.

Gobius paganellus Linnaeus, 1758 – Rock goby; Kayabalığı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: BS, MA, AS, MS. Outside the area, Mediterranean and Black seas and eastern Atlantic from Scotland south to Senegal. Immigrated into northern Red Sea through Suez Canal.
Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Gobius vittatus Vinciguerra, 1883 – Striped goby; Çizgili kayabalığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Endemic to Mediterranean Sea.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT. Local importance. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive.

Knipowitschia caucasica (Berg in Kavraiskii, 1916) – Caucasian goby; Küçük kayabalığı, kayabalığı
Distribution. Black Sea, Sea of Marmara and Aegean Sea. Introduced into Eğirdir Gölü. Fresh water, transitional water and marine. Turkey regions: BS, MA, AS; EB, EM, AD, BD, WL, (CL). Endemic to northern Adriatic, Aegean Sea, Sea of Marmara, Black Sea and Caspian Sea. Black Sea to Aegean Sea populations isolated from others.
Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT. Local importance. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive.

**Knipowitschia ephesi* Ahnelt, 1995 – Ephesus goby
Distribution. Ephesus area; Büyük Menderes River system; Bafa Gölü. Transitional and marine water. Turkey regions: AS; AD, WL. Endemic to the area.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT. Is threatened due to habitat destruction and pollution (Crivelli 1996). Global importance. Rare. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive, as a prioritary species.

Knipowitschia longecaudata (Kessler, 1877) – Longtail goby
Taxonomy. Named *Pomatoschistus longecaudatus* by authors.
Distribution. Black Sea estuaries. Fresh water, transitional and marine water. Turkey regions: BS; EB, BD. Endemic to Black Sea, Sea of Azov and Caspian Sea watersheds.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT. Local importance. Rare. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive.

**Knipowitschia mermere* Ahnelt, 1995 – Marmara goby
Distribution. Sea of Marmara. Fresh water, transitional and marine water. Turkey regions: MA; AD. Endemic to the area.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT. Global importance. Rare. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive, as a prioritary species.

Lesueurigobius friesii (Malm, 1874) – Fries's goby; Kayabalığı
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional and marine water. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from southern Norway south to Mauritania.

Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Lesueurigobius suerii Risso, 1810 – LeSueur's goby; Sarıyanak kayabalığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Morocco to Canary Islands.
Conservation. Vulnerable in Turkey (VU). Threats: FIT, HAB, EUT. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Mesogobius batrachocephalus (Pallas, 1814) – Knout goby; Kurbağa kayabalığı, yassikafa kayabalığı
Distribution. Black Sea and Sea of Marmara including adjacent estuaries. Fresh water and transitional water. Turkey regions: BS, MA; EB, AD, BD. Endemic to Black Sea, Sea of Marmara and Sea of Azov.
Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT, ABS. Local importance. Sensitivity to human activities unknown. Keystone species. Decline unknown. Medium priority for conservation action.

Neogobius constructor (Nordmann, 1840) – Blackbelly river goby
Taxonomy. *Neogobius rhodioni* Vasil'eva & Vasil'ev, 1994 is a synonym.
Distribution. Eastern Black Sea watersheds. Fresh water and transitional water. Turkey regions: BS; BD. Outside the area, rivers in eastern Black Sea watersheds of the Caucasus region.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, ABS. Sensitivity to human activities unknown. Keystone species. Decline unknown. Low priority for conservation action.

Neogobius cyrius (Kessler, 1874) – Kura goby
Distribution. Kura-Aras watersheds. Fresh water and transitional water (fresh water only in Turkey). Turkey region: CD. Endemic to southwestern Caspian Sea watersheds.
Conservation. Data deficient in Turkey (DD), probably extinct. Threats: HAB, EUT, CON. Rare. Local importance. Sensitive to human activities. No keystone species. Decline unknown. Medium priority for conservation action.

Neogobius eurycephalus (Kessler, 1874) – Mushroom goby; Kayabalığı
Distribution. Black Sea and adjacent estuaries and lower watersheds. Fresh water and transitional water. Turkey regions: BS; EB, BD. Endemic to Black Sea and Sea of Azov and adjacent watersheds.
Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT, ABS. Local importance. Sensitivity to human activities unknown. No keystone species. decline unknown. Low priority for conservation action.

Neogobius fluviatilis (Pallas, 1814) – Monkey goby; Tatlisu kayası balığı
Distribution. Black Sea watersheds. Fresh water and transitional water. Turkey regions: BS; EB, BD. Outside the area, Black Sea and northern Caspian Sea watersheds.
Conservation. Data deficient in Turkey (DD). Listed as data deficient by IUCN since 1 Aug. 1996 (Baillie et al. 2004). Threats: HAB, EUT, ABS. Sensitivity to human activities unknown. Keystone species. Decline unknown. Low priority for conservation action.

Neogobius gymnotrachelus (Kessler, 1857) – Racer goby; Küçük kayabalığı
Distribution. Black Sea watersheds. Fresh water and transitional water. Turkey regions: BS; EB, BD. Endemic to Black Sea, northern and central Caspian Sea watersheds.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS. Local importance. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive.

Neogobius kessleri (Günther, 1861) – Bighead goby
Distribution. Northwestern and northeastern Black Sea watersheds. Fresh water and transitional water. Turkey regions: BS; EB, BD. Endemic to northwestern Black Sea watersheds and northern Caspian Sea watersheds.
Conservation. Endangered in Turkey (EN). Threats: HAB, EUT, CON, ABS. Local importance. Sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Proposed for Annex II of the EU Habitats Directive.

Neogobius melanostomus (Pallas, 1814) – Round goby; Kayabalığı, kum kayabalığı
Taxonomy. Synonyms: *Gobius affinis* Eichwald, 1831; *Gobius cephalarges* Pallas, 1814.
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Caspian Sea watersheds. Fresh water, transitional water and marine. Turkey regions: BS, MA, AS; EB, EM, AD, BD, CD. Endemic to Black Sea, Sea of Azov and Caspian Sea watersheds.
Conservation. Data deficient in Turkey (DD). Extinct in Caspian Sea watersheds. Threats: HAB, EUT, CON, ABS. Local importance. Sensitivity to human activities unknown. Keystone species. Significant/regional decline. Medium priority for conservation action.

Neogobius platyrostris (Pallas, 1814) – Flatsnout goby; Sarı kayabalığı
Distribution. Eastern Black Sea watersheds. Fresh water and transitional water. Turkey regions: BS; BD. Endemic to eastern Black Sea watersheds.
Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT, CON, ABS. Local importance. Sensitivity to human activities unknown. Keystone species. Decline unknown. Medium priority for conservation action.

Neogobius ratan (Pallas, 1814) – Ratan goby; Kayabalığı
Distribution. Black Sea and Caspian Sea watersheds. Fresh water and transitional water. Turkey regions: BS; EB, BD, CD. Endemic to Black Sea, Sea of Azov and Caspian Sea watersheds.
Conservation. Endangered in Turkey (EN). Extinct in Caspian Sea watersheds. Threats: HAB, EUT, CON, ABS. Local importance. Sensitive to human activities. Keystone species. Significant/regional decline. High priority for conservation action.

Neogobius syrman (Pallas, 1814) – Syrman goby; Kayabalığı
Distribution. Black Sea, Sea of Marmara and Caspian Sea watersheds. Fresh water and transitional water. Turkey regions: BS, MA; EB, AD, BD, CD. Endemic to Black Sea, Sea of Azov and Caspian Sea watersheds.
Conservation. Endangered in Turkey (EN). Extinct in Caspian Sea watersheds. Listed as data deficient by IUCN since 1 Aug. 1996 (Baillie et al. 2004). Threats: HAB, EUT, CON, ABS. Local importance. Sensitive to human activities. Keystone species. Significant/regional decline. High priority for conservation action.

Oxyurichthys petersi (Klunzinger, 1871) – Frogface goby; Sivrikuyruk kayabalığı
Distribution. Aegean Sea and Mediterranean Sea. Lessepsian immigrant into Mediterranean through the Suez Canal; not native to Turkey. Transitional water and marine. Turkey regions: (AS, MS). Outside the area, originally Red Sea, East and South Africa east to Philippines and New Guinea.
Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Pomatoschistus adriaticus Miller, 1973 – Mediterranean painted goby; Kayabalığı
Taxonomy. Treated as valid subspecies of *Pomatoschistus pictus* (Malm, 1865) by Miller (1986: 1076).
Distribution. Sea of Marmara. Probably also Aegean Sea; data deficient. Transitional water and marine. Turkey region: MA. Endemic to Adriatic Sea and Sea of Marmara; Turkish population isolated.
Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT. Local importance. Rare. Sensitive to human activities. No keystone species. Probable decline. High priority for conservation action.

Pomatoschistus bathi Miller, 1982 – Bath's goby; Küçük kayabalığı

Distribution. Sea of Marmara and Aegean Sea. Probably also in Turkish part of Mediterranean Sea; data deficient. Transitional water and marine. Turkey regions: MA, AS. Endemic to Mediterranean Sea.

Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT. Local importance. Sensitive to human activities. No keystone species. Probable decline. Medium priority for conservation action.

Pomatoschistus marmoratus (Risso, 1810) – Marbled goby; Küçük kayabalığı, lekeli hurma kayası balığı

Taxonomy. Synonym: *Gobius leopardinus* Nordmann, 1840.

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea including adjacent estuaries. Transitional water and marine. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Endemic to Black Sea, Mediterranean Sea and adjacent Mediterranean Atlantic.

Conservation. Near threatened in Turkey (NT). Threats: HAB, EUT. Local importance. Sensitivity to human activities unknown. Keystone species. Significant/regional decline. Medium priority for conservation action.

Pomatoschistus minutus (Pallas, 1770) – Sand goby; Küçük kayabalığı

Taxonomy. Synonym: *Pomatoschistus minutus elongatus* Canestrini, 1862.

Distribution. Black Sea and Sea of Marmara. Black Sea and Sea of Marmara populations isolated from others. Transitional water and marine. Turkey regions: BS, MA. Outside the area, northern Mediterranean Sea and Black Sea; eastern Atlantic from Norway south to Spain.

Conservation. Near threatened in Turkey (NT). Threats: HAB, EUT. Local importance. Not sensitive to human activities. Keystone species. Significant/regional decline. Medium priority for conservation action.

Pomatoschistus quagga (Heckel, 1837) – Quagga goby

Distribution. Aegean Sea. **New record** for Turkey and the eastern Mediterranean based on underwater photographs taken in 2001 by Ateş Evirgen from the northern shores of Gökova Bay (Aegean Sea), at a depth of ca. 15 m. A large school of *P. quagga* was observed at the locality, indicating a well established population in Gökova Bay. Marine species. Turkey region: AS. Endemic to northwestern Mediterranean Sea, including the Adriatic.

Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT. Local importance. Sensitivity to human activities unknown. No keystone species. Decline unknown. Medium priority for conservation action.

Proterorhinus marmoratus (Pallas, 1814) – Tubenose goby; Tatlisu kayabalığı

Distribution. Black Sea and Caspian Sea watersheds; northern Aegean Sea watersheds. Recorded from Lake İznik by Özuluğ et al. (2005: 373). Formerly in Bafa Gölü (Sarı et al. 1999). Black Sea and Sea of Marmara populations isolated from others. Fresh water, transitional water and marine. Turkey regions: BS, MA, AS; EM, EB, AD, WL, BD, CD. Endemic to Black Sea, Caspian Sea, Sea of Azov and northern Aegean Sea watersheds.

Conservation. Data deficient in Turkey (DD). Extinct in Caspian Sea watersheds and Bafa Gölü/Lake Bafa (Sarı et al. 1999). Threats: HAB, EUT. Local importance. Sensitive to human activities. No keystone species. Significant/regional decline. Medium priority for conservation action.

Thorogobius ephippiatus (Lowe, 1839) – Leopard goby; Kayabalığı

Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from southern Norway south to Madeira and Canary Islands.

Conservation. Data deficient in Turkey (DD). Threats: HAB, EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Zebrus zebrus (Risso, 1827) – Zebra goby; Kayabalığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Endemic to Mediterranean Sea.
Conservation. Vulnerable in Turkey (VU). Threats: HAB, EUT. Local importance. Sensitive to human activities. No keystone species. Significant/regional decline. Medium priority for conservation action.

Zosterisessor ophiocephalus (Pallas, 1814) – Grass goby; Saz kayası balığı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea including adjacent estuaries. Transitional water and marine. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Endemic to Mediterranean Sea, Black Sea and Sea of Azov.
Conservation. Data deficient in Turkey (DD). Listed as data deficient by IUCN since 1 Aug. 1996 (Baillie et al. 2004). Threats: HAB, EUT. Local importance. Sensitivity to human activities unknown. Keystone species. Decline unknown. Medium priority for conservation action.

Ephippidae – Batfishes

Platax teira (Forsskål in Niebuhr, 1775) – Teira batfish
Distribution. Aegean Sea and Mediterranean Sea. Recorded from Turkey by Bilecenoglu & Kaya (2006). Lessepsian immigrant into Mediterranean through the Suez Canal; not native to Turkey. Marine species. Turkey regions: AS; MS. Outside the area, Red Sea and East Africa east to New Guinea, north to Ryukyu Islands, south to Queensland/Australia.
Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Siganidae – Spinefeet

Siganus luridus (Rüppell, 1829) – Dusky spinefoot; Esmer sokar, sokkan
Distribution. Aegean Sea and Mediterranean Sea. Lessepsian immigrant into Mediterranean through the Suez Canal; not native to Turkey. Marine species. Turkey regions: (AS, MS). Outside the area, originally from Red Sea and East Africa to islands in Western Indian Ocean.
Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Siganus rivulatus Forsskål in Niebuhr, 1775 – Marbled spinefoot; Beyaz sokar, sokkan
Distribution. Aegean Sea and Mediterranean Sea. Lessepsian immigrant into Mediterranean through the Suez Canal; not native to Turkey. Marine species. Turkey regions: (AS, MS). Outside the area, originally Red Sea and East Africa.
Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Luvaridae – Luvars

Luvarus imperialis Rafinesque-Schmaltz, 1810 – Luvar; Imparator balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, worldwide in tropical, subtropical and temperate oceans.
Conservation. Threatened migrant in Turkey (TM). Threats: FIB. Sensitivity to human activities unknown. No keystone species. Significant decline. Low priority for conservation action.

Sphyraenidae – Barracudas

Sphyraena chrysotaenia Klunzinger, 1884 – Yellowstripe barracuda; Iskarmoz
Distribution. Aegean Sea and Mediterranean Sea. Lessepsian immigrant into Mediterranean through the Suez Canal; not native to Turkey. Marine species. Turkey regions: (AS, MS). Outside the area, originally Red Sea and East Africa to India and Maldives.
Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Sphyraena flavicauda Rüppell, 1838 – Yellowtail barracuda; Iskarmoz
Distribution. Mediterranean Sea. Lessepsian immigrant into Mediterranean through the Suez Canal; not native to Turkey. Marine species. Turkey region: (MS). Outside the area, originally Red Sea and East Africa east to Samoa, north to Ryukyu Islands, south to Queensland/Australia.
Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Sphyraena sphyraena (Linnaeus, 1758) – European barracuda; Iskarmoz
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Recorded from Koycegiz Lagoon/Dalyan River system by Akin et al. (2005: 676). Transitional water and marine. Turkey regions: BS, MA, AS, MS; AD, MD. Outside the area, Mediterranean and Black seas and eastern Atlantic from Bay of Biscay south to Angola including Azores; in Western Atlantic from Bermuda and Brazil.
Conservation. Vulnerable in Turkey (VU). Threats: FIT, EUT. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Sphyraena viridensis Cuvier in Cuvier & Valenciennes, 1829 – Yellowmouth barracuda; Iskarmoz
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Canary Islands, Madeira, Azores and Cape Verde Islands, probably more widespread.
Conservation. Vulnerable in Turkey (VU). Threats: FIT, EUT. Sensitive to human activities. No keystone species. Significant/regional decline. Low priority for conservation action.

Gempylidae – Snake mackerels

Ruvettus pretiosus Cocco, 1833 – Oilfish; Kalas balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, worldwide in tropical, subtropical and temperate oceans.
Conservation. Data deficient in Turkey (DD). Threats: EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Trichiuridae – Cutlassfishes

Lepidopus caudatus (Euphrasen, 1788) – Silver scabbardfish; Palaska balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, widespread in tropical and warm temperate eastern Atlantic, southern Indian Ocean and South Pacific.
Conservation. Threatened migrant in Turkey (TM). Threats: FIT, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Trichiurus lepturus Linnaeus, 1758 – Largehead hairtail; Kilkuyruk balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, worldwide in subtropical oceans.

Conservation. Threatened migrant in Turkey (TM). Threats: FIT, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Scombridae – Mackerels and tunas

Auxis rochei (Risso, 1810) – Bullet tuna; Gobene, tombik, tulina
Taxonomy. Treated as a valid subspecies of *Auxis rochei* by Collette (2001: 3729).
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional water and marine. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, worldwide in tropical and subtropical oceans.
Conservation. Threatened migrant in Turkey (TM). Threats: FIT, EUT. Very sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Highly migratory species, listed on Annex I of the 1982 Convention on the Law of the Sea (Anonymus 1994).

Euthynnus alletteratus (Rafinesque-Schmaltz, 1810) – Little tunny; Yazili orkinoz
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional water and marine. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and tropical and subtropical waters of Atlantic Ocean.
Conservation. Threatened migrant in Turkey (TM). Threats: FIT, EUT. Very sensitive to human activities. No keystone species. Significant decline. High priority for conservation action. Highly migratory species, listed on Annex I of the 1982 Convention on the Law of the Sea (Anonymus 1994).

Katsuwonus pelamis (Linnaeus, 1758) – Skipjack tuna; Çizgili orkinoz
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, worldwide in tropical and warm temperate oceans.
Conservation. Threatened migrant in Turkey (TM). Threats: FIT, EUT. Sensitive to human activities. Keystone species. Significant decline. High priority for conservation action. Highly migratory species, listed on Annex I of the 1982 Convention on the Law of the Sea (Anonymus 1994).

Orcynopsis unicolor (Geoffroy Saint-Hilaire, 1817) – Plain bonito; Akpalamut
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and continental coast of eastern Atlantic from Norway south to Senegal.
Conservation. Threatened migrant in Turkey (TM). Threats: FIT, EUT. Very sensitive to human activities. No keystone species. Significant decline. High priority for conservation action.

Sarda sarda (Bloch, 1793) – Atlantic bonito; Palamut
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional water and marine. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean Sea and in tropical and temperate waters of Atlantic Ocean, in eastern Atlantic south to South Africa and around the Cape of Good Hope to Port Elizabeth/South Africa in Indian Ocean.
Conservation. Threatened migrant in Turkey (TM). Threats: FIT, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Scomber colias Gmelin, 1789 – Mediterranean chub mackerel; Kolyoz
Taxonomy. Common synonym: *Scomber japonicus* (non Houttuyn, 1782). Replaced by *Scomber japonicus* Houttuyn, 1792 in Indo-West Pacific.
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional water and marine. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and tropical and warm temperate waters of Atlantic Ocean.

Conservation. Vulnerable in Turkey (VU). Threats: FIT, EUT. Sensitive to human activities. Keystone species. Probable decline. Medium priority for conservation action.

Scomber scombrus Linnaeus, 1758 – Atlantic mackerel; Uskumru
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Recorded from Koycegiz Lagoon/Dalyan River system by Akin et al. (2005: 676). Transitional water and marine. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and temperate waters of North Atlantic Ocean.
Conservation. Vulnerable in Turkey (VU). Threats: FIT, EUT. Sensitive to human activities. Keystone species. Probable decline. Medium priority for conservation action.

Scomberomorus commerson (Lacepède, 1800) – Narrow-barred Spanish mackerel; Ceylan balığı, tombak
Distribution. Aegean Sea and Mediterranean Sea. Lessepsian immigrant into Mediterranean through the Suez Canal; not native to Turkey. Marine species. Turkey regions: (AS, MS). Outside the area, originally Red Sea, East and South Africa east to Fiji, north to southern Japan, south to New South Wales/Australia.
Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Thunnus alalunga (Bonnaterre, 1788) – Albacore; Orkinoz
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional water and marine. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, worldwide in tropical and temperate oceans.
Conservation. Critically endangered in Turkey (CR). Threats: FIT, HAB, EUT. Very sensitive to human activities. Keystone species. Severe decline. High priority for conservation action. Highly migratory species, listed on Annex I of the 1982 Convention on the Law of the Sea (Anonymus 1994). Proposed for Annexes II and IV of the EU Habitats Directive.

Thunnus thynnus (Linnaeus, 1758) – Northern bluefin tuna; Orkinoz, ton balığı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional water and marine. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and temperate waters of North Atlantic; South Africa.
Conservation. Critically endangered in Turkey (CR). Threats: FIT, HAB, EUT. Very sensitive to human activities. Keystone species. Severe decline. High priority for conservation action. Highly migratory species, listed on Annex I of the 1982 Convention on the Law of the Sea (Anonymus 1994). Proposed for Annexes II and IV of the EU Habitats Directive.

Xiphiidae – Swordfishes

Xiphias gladius Linnaeus, 1758 – Swordfish; Kiliç balığı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Mediterranean population genetically separate from tropical Atlantic population (Anonymus 1994). Transitional water and marine. Turkey regions: BS, MA, AS, MS. Outside the area, worldwide in tropical, subtropical, temperate and (occasionally) cold oceans.
Conservation. Threatened migrant in Turkey (TM). Threats: FIT, EUT. Local importance. Sensitive to human activities. Keystone species. Significant decline. High priority for conservation action. Highly migratory species, listed on Annex I of the 1982 Convention on the Law of the Sea (Anonymus 1994).

Istiophoridae – Sailfishes

Istiophorus albicans (Latreille, 1804) – Atlantic sailfish
Taxonomy. Replaced in Indo-Pacific by *Istiophorus platypterus* (Shaw, 1792) according to Nakamura (1985: 21).

Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, in tropical and temperate waters of the Atlantic Ocean including Mediterranean Sea.

Conservation. Threatened migrant in Turkey (TM). Threats: FIT, EUT. Very sensitive to human activities. Keystone species. Significant decline. High priority for conservation action. Highly migratory species, listed on Annex I of the 1982 Convention on the Law of the Sea (Anonymus 1994).

Tetrapturus belone Rafinesque-Schmaltz, 1810 – Mediterranean spearfish; Kiliç balığı

Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Endemic to Mediterranean Sea.

Conservation. Threatened migrant in Turkey (TM). Threats: FIT, EUT. Very sensitive to human activities. Local importance. Keystone species. Significant decline. High priority for conservation action. Highly migratory species, listed on Annex I of the 1982 Convention on the Law of the Sea (Anonymus 1994).

Centrolophidae – Blackfishes

Centrolophus niger (Gmelin, 1789) – Blackfish; Kara balığı

Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and antitropical in temperate waters of Atlantic Ocean, southern Indian Ocean and South Pacific (including northern parts of Southern Ocean).

Conservation. Threatened migrant in Turkey (TM). Threats: FIB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Schedophilus ovalis (Cuvier in Cuvier & Valenciennes, 1833) – Imperial blackfish

Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and temperate eastern Atlantic, straying to Bermuda. Records from other areas are probably based on misidentifications.

Conservation. Endangered in Turkey (EN). Threats: FIB, HAB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Nomeidae – Driftfishes

Cubiceps gracilis Lowe, 1843 – Driftfish

Distribution. Mediterranean Sea. Marine species. Turkey region: MS. Outside the area, western Mediterranean Sea and northeastern Atlantic from Bay of Biscay south to Mauritania.

Conservation. Data deficient in Turkey (DD). Threats: FIB, EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Stromateidae – Butterfishes

Stromateus fiatola Linnaeus, 1758 – Blue butterfish; Yildiz balığı

Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Bay of Biscay south to South Africa.

Conservation. Data deficient in Turkey (DD). Threats: FIB, EUT. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Caproidae – Boarfishes

Capros aper (Linnaeus, 1758) – Boarfish; Peri balığı
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and northeastern Atlantic from Norway south to Senegal.
Conservation. Near threatened in Turkey (NT). Threats: FIT, FIB, EUT. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Citharidae – Citharids

Citharus linguatula (Linnaeus, 1758) – Atlantic spotted flounder; Kancaagiz pisibalığı
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and Morocco south to Angola, possibly Namibia.
Conservation. Vulnerable in Turkey (VU). Threats: FIT, FIB, HAB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Scophthalmidae – Turbots

Lepidorhombus boscii (Risso, 1810) – Four-spotted megrim; Benekli pisibalığı
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from British Isles south to Western Sahara.
Conservation. Vulnerable in Turkey (VU). Threats: FIT, FIB, HAB, EUT. Sensitive to human activities. Keystone species. Probable decline. Medium priority for conservation action.

Lepidorhombus whiffiagonis (Walbaum, 1792) – Megrim; Pisibalığı
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Iceland and Norway south to Western Sahara.
Conservation. Data deficient in Turkey (DD). Threats: FIB, HAB, EUT. Sensitive to human activities. No keystone species. Probable decline. Medium priority for conservation action.

Psetta maeotica (Pallas, 1814) – Black Sea brill; Kalkan
Taxonomy. Named *Scophthalmus maeoticus* by authors.
Distribution. Black Sea including estuaries. Fresh water and transitional water. Turkey regions: BS; EB, BD. Endemic to Black Sea.
Conservation. Endangered in Turkey (EN). Threats: FIT, FIB, HAB, EUT. Local importance. Sensitive to human activities. Keystone species. Significant decline. High priority for conservation action. Proposed for Annexes II and V of the EU Habitats Directive.

Psetta maxima (Linnaeus, 1758) – Turbot; Kalkan
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional water and marine. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from Norway south to Morocco.
Conservation. Endangered in Turkey (EN). Threats: FIT, FIB, HAB, EUT. Sensitive to human activities. Keystone species. Significant decline. High priority for conservation action.

Scophthalmus rhombus (Linnaeus, 1758) – Brill; Dişi kalkan, çivisiz kalkan
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional water and marine. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Out-

side the area, Mediterranean and Black seas and eastern Atlantic from Iceland and Norway south to Morocco.

Conservation. Vulnerable in Turkey (VU). Threats: FIT, FIB, HAB, EUT. Sensitive to human activities. Keystone species. Probable decline. Medium priority for conservation action.

Zeugopterus regius (Bonnaterre, 1788) – Eckström's topknot; Küçük pisibalığı

Taxonomy. Named *Phrynorhombus regius* by authors.

Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from British Isles south to Morocco.

Conservation. Vulnerable in Turkey (VU). Threats: FIB, HAB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Pleuronectidae – Flounders

Platichthys luscus (Pallas, 1814) – Mediterranean flounder; Derepisisi balığı

Taxonomy. Treated as a valid subspecies of *Platichthys flesus* (Linnaeus, 1758) by authors. Recorded from Turkey by Kuru (2004: 18) under the name *Platichthys flesus*.

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea and adjacent watersheds. Fresh water, transitional water and marine. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Endemic to northern Mediterranean Sea and Black Sea.

Conservation. Near threatened in Turkey (NT). Threats: FIT, FIB, CON. Sensitivity to human activities unknown. Local importance. No keystone species. Significant/regional decline. Medium priority for conservation action.

Bothidae – Lefteyed flounders

Arnoglossus grohmanni (Bonaparte, 1837) – Grohmann's scaldfish; Küçük pisibalığı

Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Endemic to Mediterranean Sea; data deficient.

Conservation. Data deficient in Turkey (DD). Threats: FIB, HAB, EUT. Local importance. Sensitive to human activities. No keystone species. Probable decline. Medium priority for conservation action.

Arnoglossus imperialis (Rafinesque-Schmaltz, 1810) – Imperial scaldfish; Küçük pisibalığı

Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Endemic to Mediterranean Sea; data deficient.

Conservation. Vulnerable in Turkey (VU). Threats: FIT, FIB, HAB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Arnoglossus kessleri Schmidt, 1915 – Scaldback; Küçük pisibalığı

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional water and marine. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Endemic to Mediterranean and Black seas.

Conservation. Near threatened in Turkey (NT). Threats: FIB, HAB, EUT. Local importance. Sensitive to human activities. No keystone species. Decline unknown. Medium priority for conservation action.

Arnoglossus laterna (Walbaum, 1792) – Scaldfish; Küçük pisibalığı

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional water and marine. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from Norway south to Angola.

Conservation. Vulnerable in Turkey (VU). Threats: FIT, FIB, HAB, EUT. Sensitive to human activities. Keystone species. Probable decline. Medium priority for conservation action.

Arnoglossus rueppelii (Cocco, 1844) – Rüppell's scaldback; Küçük pisibalığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Gibraltar and Madeira south to Canary Islands and Western Sahara.
Conservation. Data deficient in Turkey (DD). Threats: FIB, HAB, EUT. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Arnoglossus thori Kyle, 1913 – Thor's scaldfish; Küçük pisibalığı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional water and marine. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from Ireland south to Sierra Leone and Cape Verde Islands.
Conservation. Near threatened in Turkey (NT). Threats: FIB, HAB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Bothus podas (Delaroche, 1809) – Wide-eyed flounder; Pisibalığı
Taxonomy. Treated as a valid subspecies of *Bothus podas* by authors.
Distribution. Aegean Sea and Mediterranean Sea. Recorded from Koycegiz Lagoon/Dalyan River system by Akin et al. (2005: 676). Transitional water and marine. Turkey regions: AS, MS; AD, MD. Outside the area, Mediterranean Sea and eastern Atlantic from Morocco south to Angola.
Conservation. Vulnerable in Turkey (VU). Threats: FIB, HAB, EUT. Sensitive to human activities. Keystone species. Decline unknown. Medium priority for conservation action.

Soleidae – Soles

Buglossidium luteum (Risso, 1810) – Solenette; Küçük dil balığı
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional water and marine. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from Iceland and Scotland south to Morocco.
Conservation. Vulnerable in Turkey (VU). Threats: FIB, HAB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Dicologlossa cuneata (Moreau, 1881) – Wedge sole
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Bay of Biscay south to Cape of Good Hope/South Africa.
Conservation. Vulnerable in Turkey (VU). Threats: FIB, HAB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Microchirus azevia Brito Capello, 1867 – Azevia sole
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Portugal south to Senegal, straying north to British Isles.
Conservation. Data deficient in Turkey (DD). Threats: FIB, HAB, EUT. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Microchirus ocellatus (Linnaeus, 1758) – Four-eyed sole; Benekli dil balığı
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Spain south to Sierra Leone; Natal/South Africa.
Conservation. Vulnerable in Turkey (VU). Threats: FIB, HAB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Microchirus variegatus (Donovan, 1808) – Thickback sole; Lekelidil balığı

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional water and marine. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from British Isles south to Senegal.

Conservation. Vulnerable in Turkey (VU). Threats: FIB, HAB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Monochirus hispidus Rafinesque, 1814 – Whiskered sole; Küçük dil balığı

Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Portugal south to Ghana.

Conservation. Vulnerable in Turkey (VU). Threats: FIB, HAB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Pegusa impar (Bennett, 1831) – Adriatic sole

Taxonomy. *Pegusa impar* is a valid species according to Borsa & Quignard (2001: 2301); it was confused with *Pegusa lascaris* by authors.

Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Gibraltar south to Senegal.

Conservation. Data deficient in Turkey (DD). Threats: FIT, FIB, HAB, EUT. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Pegusa lascaris (Risso, 1810) – Sand sole; Dil balığı

Taxonomy. Named *Solea lascaris* by authors.

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional water and marine. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from British Isles south to South Africa. Immigrated into Suez Canal.

Conservation. Vulnerable in Turkey (VU). Threats: FIT, FIB, HAB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Solea senegalensis Kaup, 1858 – Senegal sole; Dil balığı

Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from France south to Angola.

Conservation. Data deficient in Turkey (DD). Threats: FIT, FIB, HAB, EUT. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Solea solea (Linnaeus, 1758) – Common sole; Dil balığı

Taxonomy. Synonym: *Solea vulgaris*.

Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea and adjacent estuaries. Transitional water and marine. Turkey regions: BS, MA, AS, MS; EB, EM, AD, MD, BD, OD. Outside the area, Mediterranean and Black seas and eastern Atlantic from Norway south to Senegal and Cape Verde Islands.

Conservation. Endangered in Turkey (EN). Threats: FIT, FIB, HAB, EUT. Very sensitive to human activities. Keystone species. Significant decline. High priority for conservation action.

Synapturichthys kleinii (Risso, 1827) – Klein's sole; Dil balığı

Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Morocco south to South Africa.

Conservation. Data deficient in Turkey (DD). Threats: FIB, HAB, EUT. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Cynoglossidae – Tongue soles

Cynoglossus sinusarabici (Chabanaud, 1931) – Gulf tongue sole; Sivrikuyruk dil balığı
Distribution. Mediterranean Sea. Lessepsian immigrant into Mediterranean through the Suez Canal; not native to Turkey. Marine species. Turkey region: (MS). Outside the area, Indo-West Pacific.
Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Symphurus nigrescens Rafinesque-Schmaltz, 1810 – Tongue sole; Sivrikuyruk dil balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, Mediterranean Sea and eastern Atlantic from Portugal and Azores south to Angola, Saint Helena and Ascension islands.
Conservation. Data deficient in Turkey (DD). Threats: FIB, HAB, EUT. Sensitive to human activities. No keystone species. Decline unknown. Low priority for conservation action.

Balistidae – Triggerfishes

Balistes capriscus Gmelin, 1789 – Grey triggerfish; Çütre, domuz balığı
Taxonomy. *Balistes carolinensis* Gmelin, 1789 is a synonym.
Distribution. Black Sea, Sea of Marmara, Aegean Sea and Mediterranean Sea. Transitional water and marine. Turkey regions: BS, MA, AS, MS. Outside the area, Mediterranean and Black seas and tropical and warm temperate waters of Atlantic Ocean.
Conservation. Threatened migrant in Turkey (TM). Threats: FIB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Monacanthidae – Leatherjackets

Stephanolepis diaspros Fraser-Brunner, 1940 – Reticulated leatherjacket; Dikenli çütre
Distribution. Aegean Sea and Mediterranean Sea. Lessepsian immigrant into Mediterranean through the Suez Canal; not native to Turkey. Marine species. Turkey regions: (AS, MS). Outside the area, originally Red Sea to Persian/Arabian Gulf.
Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Tetraodontidae – Pufferfishes

Lagocephalus lagocephalus (Linnaeus, 1758) – Oceanic puffer; Mavi balon balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, worldwide in tropical and subtropical oceans.
Conservation. Endangered in Turkey (EN). Threats: FIB, EUT, LES. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Lagocephalus sceleratus (Gmelin, 1789) – Silverstripe pufferfish; Benekli balon balığı
Distribution. Aegean Sea and Mediterranean Sea. Lessepsian immigrant into Mediterranean through the Suez Canal; not native to Turkey. Marine species. Turkey regions: (AS, MS). Outside the area, Red Sea, East and South Africa east to Samoa.
Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Lagocephalus spadiceus (Richardson, 1845) – Half-smooth golden pufferfish; Balon balığı
Distribution. Aegean Sea and Mediterranean Sea. Lessepsian immigrant into Mediterranean through the Suez Canal; not native to Turkey. Marine species. Turkey regions: (AS, MS). Outside the area, Red Sea, East and South Africa east to Fiji.
Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Lagocephalus suezensis Clark & Gohar, 1953 – Suez pufferfish; Balon balığı
Distribution. Aegean Sea and Mediterranean Sea. Lessepsian immigrant into Mediterranean through the Suez Canal; not native to Turkey. Marine species. Turkey regions: (AS, MS). Outside the area, northern Red Sea.
Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Sphoeroides pachygaster (Müller & Troschel, 1848) – Blunthead puffer; Balon balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, worldwide in tropical and temperate oceans.
Conservation. Data deficient in Turkey (DD). Listed as vulnerable by IUCN since 1 Aug. 1996 (Baillie et al. 2004). Threats: FIB, EUT, LES. Rare. Sensitivity to human activities unknown. No keystone species. Decline unknown. Low priority for conservation action.

Torquigener flavimaculosus Hardy & Randall, 1983 – Yellowspot puffer; Cüce balon balığı
Distribution. Mediterranean Sea. Lessepsian immigrant into Mediterranean through the Suez Canal; not native to Turkey. Marine species. Turkey region: (MS). Outside the area, western Indian Ocean.
Conservation. Not evaluated in Turkey (NE). No conservation scheme, as the species is not native.

Molidae – Sunfishes

Mola mola (Linnaeus, 1758) – Ocean sunfish; Aybalığı
Distribution. Sea of Marmara, Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: MA, AS, MS. Outside the area, worldwide in tropical and temperate oceans.
Conservation. Threatened migrant in Turkey (TM). Threats: FIB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

Ranzania laevis (Pennant, 1776) – Slender sunfish; Pervane balığı
Distribution. Aegean Sea and Mediterranean Sea. Marine species. Turkey regions: AS, MS. Outside the area, worldwide in tropical and temperate oceans.
Conservation. Threatened migrant in Turkey (TM). Threats: FIB, EUT. Sensitive to human activities. No keystone species. Significant decline. Low priority for conservation action.

4 The Turkish fish fauna and its endemism

The Turkish fish and lamprey fauna comprises a total of 694 species in 155 families. 46 of these species are not native, but are either introduced or Lessepsian immigrants through the Suez Canal. 14 fish families are represented only by introduced or immigrated species. The native fish fauna of Turkey therefore consists of 648 species in 141 families. The largest families are the Cyprinidae (127 native species plus 2 introduced species), Gobiidae (41 native species plus one immigrated species), Sparidae (21 native species), Labridae and Blenniidae (18 native species plus one immigrated species each), Balitoridae (17 native species), Cobitidae and Myctophidae (16 native species each), Carangidae (14 native species plus one immigrated species), Rajidae (13 native species), Clupeidae (12 native species plus three immigrated species) and Syngnathidae (12 native species plus one immigrated species), Soleidae (11 native species), Serranidae and Cyprinodontidae (10 native species each). The freshwater fish fauna is dominated by the families Cyprinidae, Balitoridae and Cobitidae, while the most speciate marine fish groups are the Gobiidae and Sparidae.

The fish and lamprey fauna of Turkey includes a total of 248 species occurring in fresh water (plus 13 introduced species), 279 species of transitional waters (plus eight introduced species) and 434 species in marine habitats (plus 46 immigrated or introduced species). The marine element includes 367 species known from the Mediterranean Sea (plus 41 Lessepsian immigrants and two introduced species), 390 from the Aegean Sea (plus 25 Lessepsian immigrants), 247 from the Sea of Marmara (plus one introduced species) and 156 from the Black Sea (plus one introduced species).

In transitional waters, 146 species are found in estuaries of the European Black Sea watersheds, 120 species in the European Mediterranean watersheds (plus one introduced species), 148 species in the Aegean Sea watersheds, 133 species in the Anatolian Mediterranean Sea watersheds (plus two introduced species), three species in Western Lakes watersheds, eight species in Central Lakes watersheds, 138 species in Black Sea watersheds, 115 species in the Asi Nehri/Orontes Watershed, and six species in the Van Gölü watersheds.

The Turkish freshwater fish fauna consists of 76 species in European Black Sea watersheds and 42 species in European Mediterranean Sea watersheds (plus three introduced species each), 60 species in Aegean Sea watersheds (plus five introduced species), 51 species in Anatolian Mediterranean Sea watersheds (plus two introduced species), 23 species in Western Lakes watersheds and 30 species in Central Lakes watersheds (plus seven introduced species each), six species in Eastern Lakes watersheds (plus three introduced species), 83 species in Anatolian Black Sea watersheds (plus five introduced species), 35 species in Caspian Sea watersheds and 48 species in the Asi Nehri/Orontes watershed (plus four introduced species each), 22 species in the Quwayq Watershed, 57 species in the Persian/Arabian Gulf watersheds (plus nine introduced species), seven species in the Van Gölü watersheds (plus one introduced species), and three species in the Lake Urmia watersheds.

While there is no endemic marine faunal element in Turkey and only three species endemic to transitional waters of Turkey, mainly living in the Sea of Marmara, the freshwater fish fauna comprises a total of 78 endemic species (31.5 % of the total native freshwater fish fauna). 23 endemic species are found in the Central Lakes watersheds (among these seven endemic species on Beyşehir Gölü, six species in Eğirdir Gölü, two species each in Eber Gölü, Gölçül Gölü, Acigöl and Burdur Gölü), 12 endemic species each in the Anatolian Aegean Sea watersheds (most in Büyük Menderes River) and Anatolian Black Sea watersheds, 11 endemic species in the upper reaches of the Persian/Arabian Gulf watersheds, nine endemic species in the Anatolian Mediterranean Sea watersheds, eight endemic species in Western Lakes watersheds, seven endemic species in the Asi Nehri/Orontes Watershed, three endemic species each in the Van Gölü watersheds and the upper reaches of the Caspian Sea watersheds (mainly upper Kura River), and two endemic species each in the Eastern Lakes watersheds and Quwayq watershed.

5 Conservation

The following chapter is an inititial attempt to summarise the conservation status of aquatic habitats in Turkey; it is a result of the Twinning Project 'Capacity Building Environment Turkey' (TR02/EN/01).

Due to rapid economic and agricultural development and population growth during the past decades, the native Turkish fish fauna is now highly threatened and needs urgent political action to ensure its conservation. The marine fish species of Turkey are generally threatened by eutrophication/pollution out of inflowing rivers and coastal towns, by marine aquaculture (which pollutes and eutrophicates the surrounding marine waters, and threatens native marine species by escaping aquaculture fish material), by fisheries, and by construction along the shore, especially for the development of hotels in tourist areas, expansion of coastal cities, and construction of coastal roads. The Black Sea is especially threatened by heavy eutrophication and pollution; Black Sea waters below a depth of 200 metres are anoxic and deficient of any vertebrate life. The Sea of Marmara is locally polluted and eutrophicated (for example by heavy industry and urban sewage near Bandırma), and threatened by fisheries, but there are some good quality habitats remaining locally (one good quality area observed north of Erdek). The Aegean Sea was observed to have a poor water quality over most of its area in Turkish waters. The main threats to the Aegean Sea fish fauna consist of pollution, eutrophication, and extensive aquaculture, especially in the area between İzmir and Bodrum, and off Gelibolu Yarımadası. The aquaculture facilities are positioned inshore and offshore; they threaten shore fishes, pelagic and deepsea species by pollution, eutrophication and habitat loss. In addition, large shore areas are damaged by construction, mainly in tourist centres. Most of the Aegean Sea if now in poor environmental quality; marine quality indices of 3–4 to 5 (on a scale from 1 to 5, with 1 standing for the best quality, used here like freshwater saprobia indices) are frequently observed.

The Mediterranean Sea is widely threatened by pollution and eutrophication; the poorest quality was observed in Iskenderun Körfezi and south to the border of Syria. Areas between Antalya Körfezi and Adana are also locally polluted. The best (which means moderate) quality was observed in Kaş area (western Province Antalya). The Mediterranean Sea is also locally threatened by marine aquaculture in several areas, including in the area between Antalya and Kemer, Beymelek Lagoon (Antalya Province), and Güllük Körfezi (Muğla Province). Additional threats include the massive migration of Red Sea species through Suez Canal ('Lessepsian immigration') (Golani 1998a, 1998b); some immigrating foreign species diminish native Mediterranean Sea species by competition (e. g. the immigration of *Callionymus filamentosus* which resulted in the disappearance of other species of *Callionymus* in many areas).

In freshwater habitats, most rivers, streams and lakes in Turkey are heavily polluted and/or eutrophicated; saprobia indices of 4 or 5 are frequently observed. Only in some of the uppermost reaches of tributaries, better water qualities of 1–2 or 2 may be found, if no villages or agriculture are situated upstream. A single small village may bring the saprobia index from 1–2 down to 4–5. The overall situation in parts of northeastern Anatolia is slightly better than in the remaining areas of Turkey.

Additional threats in Turkish freshwater habitats include construction of dams, weirs and barrages, which pollute downstream stream and river areas, abstract water from rivers which may become dry, and prevent fish migration. Gravel extraction from river beds is observed in several Turkish watersheds, even during the fish spawning season; this results in heavy sediment freight and destruction of fish spawning grounds. In several freshwater areas, extensive aquaculture projects

threaten the native fish fauna by additional eutrophication, pollution, and competition/predation. The worst example observed is Eğirdir Gölü, which is completely used as aquaculture area. The deliberate introduction of foreign species (including *Gambusia affinis* and other species) may also threaten native fish species.

The Caspian Sea watersheds are especially threatened by dams outside and inside Turkey, which prevent the migration of species from the Caspian Sea to upstream habitats. Caspian Sea tributaries (Kura and Aras river systems) are also locally polluted and eutrophicated, and threatened by water abstraction and gravel extraction. Aegean Sea watersheds are usually heavily polluted and eutrophicated. For example, the Büyük Menderes River including most tributaries is heavily eutrophicated and polluted; it is also threatened by water abstraction, by warming of the water through the use as cooling water for power stations, and by several barrages). The saprobia index in lower Büyük Menderes was estimated as 4–5. Bafa Gölü was formerly part of the Büyük Menderes watershed, but was artificially separated. The main threat for this lake consists of eutrophication and increasing salinity, which caused an extinction of most of the native freshwater fish species (Sari et al. 1999). The saprobia index was estimated as 3–4.

Most Mediterranean Sea watersheds are heavily polluted and eutrophicated as well, and threatened by water abstraction. Göksu Çayı in Antalya Province, including its uppermost tributaries, was observed to be polluted and eutrophicated by agriculture and by barrages. The problem of water abstraction is illustrated by the example of the lower Göksu Çayı, which is water deficient even in May (observed 9 May 2006, R. Fricke and M. Akan). In Esen Çayı (Antalya Province) and Dalaman Çayı (Muğla Province), the main rivers were observed polluted and eutrophicated, with saprobia indices of 3–4 to 4–5; tributaries were also polluted or diminished by water abstraction for agricultural purposes. Köyçegiz Gölü (Muğla Province) was observed to be eutrophicated; the complete lagoon was used as aquaculture area for Mugilidae spp., *Sparus auratus*, *Dicentrarchus labrax*, *Engraulis encrasicolus* and *Tilapia zillii*. Ceyhan, Seyhan and Asi Nehri/Orontes river watersheds are likewise eutrophicated and polluted. Quwayq watershed (Province Kilis) is critically threatened by water abstraction; in October 2005, most tributaries were found dry, only a single stream was observed to carry a little running water (Sünnep Deresı), and another (Balıksuyu Deresı) had a small pool of polluted water in an otherwise dry stream bed.

The Anatolian Black Sea watersheds are often heavily eutrophicated and/or polluted, and are threatened by the construction of barrages. Many eastern Black Sea watersheds have been cut off from the Black Sea due to coastal road construction.

Anatolian lakes watersheds are generally threatened by eutrophication, pollution, construction of barrages in tributaries, water abstraction (example: Burdur Gölü) aquaculture (worst example: Eğirdir Gölü), and introduction of foreign species, especially the predatory species *Sander lucioperca*. Kara Gölü and Avlan Gölü near Elmalı have completely disappeared due to dam construction and water abstraction; where there were lakes in the past, only agricultural areas (Kara Gölü), or a melioration canal and a non-permanent swamp area (Avlan Gölü) is left.

The Firat Nehri/Euphrates River and Dicle Nehri/Tigris River are still in relatively good condition in their upper reaches, but threatened by barrages, eutrophication, pollution, aquaculture and introduction of foreign species in their middle and lower reaches in Turkey.

Tab. 7. Red List of fish and lamprey species of Turkey. – An asterisk notes a species endemic to Turkey.

EX (Extinct)

**Crossocheilus caudomaculatus*
**Orthrias tschaiyssuensis*

RE (Regionally extinct)

Caspiomyzon wagneri
Lampetra fluviatilis
Petromyzon marinus
Acipenser persicus
Acipenser sturio
Alosa braschnikovi
Alosa caspia
Rutilus kutum
Stenodus leucichthys
Salmo salar

CR (Critically endangered)

Carcharias taurus
Odontaspis ferox
Carcharodon carcharias
Lamna nasus
Squatina aculeata
Squatina oculata
Squatina squatina
Dipturus batis
Acipenser gueldenstaedtii
Acipenser nudiventris
Acipenser ruthenus
Acipenser stellatus
Huso huso
Anguilla anguilla
Alosa agone
**Acanthobrama centisquama*
**Alburnus akili*
**Alburnus kotschyi*
**Alburnus nasreddini*
Alburnus orontis
**Barbus lorteti*
**Capoeta angorae*
**Capoeta pestai*
**Chondrostoma angorense*
**Chondrostoma beysehirense*
**Chondrostoma holmwoodii*
**Chondrostoma kinzelbachi*
**Crossocheilus klatti*
**Gobio hettitorum*
Hemigrammocapoeta kemali
Ladigesocypris ghigii
**Ladigesocypris mermere*
**Leuciscus anatolicus*
**Petroleuciscus smyrnaeus*
**Pseudophoxinus anatolicus*
**Pseudophoxinus antalyae*
**Pseudophoxinus battalgili*
**Pseudophoxinus egridiri*
**Pseudophoxinus handlirschi*
**Scardinius elmaliensis*
**Schizothorax prophylax*
**Cobitis bilseli*
**Cobitis fahirae*
Cobitis levantina
**Cobitis phrygica*
**Cobitis puncticulata*
**Cobitis simplicispina*
**Cobitis splendens*
**Nemacheilus insignis*
**Seminemacheilus lendli*
Salmo caspius
**Salmo platycephalus*
Salmo trutta
**Aphanius asquamatus*
**Aphanius burdurensis*
**Aphanius danfordii*
**Aphanius splendens*
**Aphanius sureyanus*
**Aphanius transgrediens*
**Aphanius villwocki*
Remora australis
Callionymus fasciatus
Thunnus alalunga
Thunnus thynnus
Mastacembelus mastacembelus

EN (Endangered)

**Eudontomyzon lanceolata*
Eudontomyzon mariae
Alopias superciliosus
Alopias vulpinus
Scyliorhinus stellaris
Carcharhinus altimus
Carcharhinus brevipinna
Carcharhinus limbatus
Carcharhinus plumbeus
Squalus acanthias
Squalus blainville
Rhinobatos cemiculus
Rhinobatos rhinobatos
Raja asterias
Raja undulata
Rostroraja alba
Alosa immaculata
Alosa maeotica

Alosa tanaica
**Clupeonella muhlisi*
Acanthobrama marmid
**Acanthobrama mirabilis*
**Alburnus baliki*
Alburnus chalcoides
Alburnus hohenackeri
Alburnus mossulensis
**Alburnus tarichi*
Barbus barbulus
**Barbus ercisianus*
**Barbus escherichii*
Barbus kersin
Barbus lacerta
Barbus mursa
Barbus tauricus
**Capoeta antalyensis*
**Capoeta barroisi*
**Capoeta bergamae*
Capoeta damascina
**Capoeta kosswigi*
Capoeta sieboldii
**Capoeta tinca*
**Carasobarbus chantrei*
Chondrostoma colchicum
**Chondrostoma meandrense*
Chondrostoma regium
Chondrostoma vardarense
Cyprinion kais
Cyprinion macrostomum
Cyprinion tenuiradius
Hemigrammocapoeta nana
**Kosswigobarbus kosswigi*
**Leucalburnus satunini*
**Luciobarbus pectoralis*
Luciobarbus xanthopterus
Petroleuciscus borysthenicus
Phoxinellus zeregi
Phoxinus phoxinus
**Pseudophoxinus crassus*
**Pseudophoxinus fahirae*
Pseudophoxinus kervillei
**Pseudophoxinus maeandri*
Rutilus frisii
Cobitis elazigensis
**Cobitis kellei*
**Cobitis kurui*
Cobitis strumicae
Cobitis turcica
Cobitis vardarensis
Misgurnus fossilis
Sabanejewia balcanica
Orthrias brandtii
**Orthrias cyri*
Esox lucius
Salmo labrax
**Aphanius anatoliae*
Aphanius mento
Hoplostethus mediterraneus
Gasterosteus aculeatus
Hippocampus guttulatus
Hippocampus hippocampus
Peristedion cataphractum
Epinephelus aeneus
Epinephelus caninus
Epinephelus costae
Ephinephelus haifensis
Epinephelus marginatus
Mycteroperca rubra
Echeneis naucrates
Diplodus cervinus
Pagrus pagrus
Liza abu
Labrus mixtus
Labrus viridis
Symphodus melanocercus
Sparisoma cretense
Blennius ocellaris
Lipophrys nigriceps
Callionymus lyra
Callionymus maculatus
Callionymus pusillus
Callionymus risso
Gobius auratus
Gobius cruentatus
Gobius vittatus
**Knipowitschia ephesi*
Knipowitschia longecaudata
**Knipowitschia mermere*
Neogobius constructor
Neogobius gymnotrachelus
Neogobius kessleri
Neogobius ratan
Neogobius syrman
Schedophilus ovalis
Psetta maeotica
Psetta maxima
Solea solea
Lagocephalus lagocephalus

VU (Vulnerable)

Galeus melastomus
Scyliorhinus canicula
Hexanchus griseus
Centrophorus granulosus
Centrophorus uyato
Etmopterus spinax
Oxynotus centrina
Torpedo nobiliana
Torpedo marmorata
Torpedo torpedo
Raja clavata
Raja radula
Muraena helena
Sardinella aurita

Sprattus sprattus
Engraulis encrasicolus
Alburnoides bipunctatus
Alburnoides eichwaldii
**Alburnus adanensis*
Alburnus caeruleus
Alburnus filippii
Alburnus sellal
Aspius aspius
Aspius vorax
Barilius mesopotamicus
Carasobarbus luteus
Chondrostoma nasus
Chondrostoma oxyrhynchum
Garra rufa
Leuciscus spurius
Luciobarbus brachycephalus
Luciobarbus capito
Luciobarbus caspius
Luciobarbus mystaceus
Pseudophoxinus sp.
Rhodeus amarus
Romanogobio persus
Rutilus heckelii
Sabanejewia caspia
**Orthrias araxensis*
Silurus glanis
Synodus saurus
Trachipterus trachypterus
Merlangius merlangus
Micromesistius poutassou
Trisopterus minutus
Gaidropsarus biscayensis
Gaidropsarus vulgaris
Molva macrophthalma
Phycis blennoides
Phycis phycis
Merluccius merluccius
Carapus acus
Lophius budegassa
Lophius piscatorius
Gouania wildenowi
Scomberesox saurus
Belone acus
Cheilopogon heterurus
Hirundichthys rondeletii
Helicolenus dactylopterus
Scorpaena notata
Scorpaena scrofa
Chelidonichthys gurnardus
Chelidonichthys lastoviza
Chelidonichthys lucernus
Chelidonichthys obscurus
Lepidotrigla cavillone
Lepidotrigla dieuzeidei
Trigla lyra
Dicentrarchus labrax
Anthias anthias
Apogon imberbis
Naucrates ductor
Dentex dentex
Dentex gibbosus
Dentex macrophthalmus
Dentex maroccanus
Diplodus puntazzo
Lithognathus mormyrus
Pagellus acarne
Pagellus bogaraveo
Pagellus erythrinus
Pagrus auriga
Pagrus caeruleostictus
Sparus aurata
Centracanthus cirrus
Spicara maena
Spicara smaris
Sciaena umbra
Cepola macrophthalma
Acantholabrus palloni
Symphodus doderleini
Symphodus rostratus
Trachinus araneus
Trachinus draco
Trachinus radiatus
Uranoscopus scaber
Tripterygion melanurus
Tripterygion minor
Tripterygion tripteronotus
Tripterygion xanthosoma
Clinitrachus argentatus
Aidablennius sphynx
Lipophrys canevae
Lipophrys dalmatinus
Parablennius gattorugine
Parablennius incognitus
Parablennius rouxi
Parablennius tentacularis
Parablennius zvonimiri
Paralipophrys trigloides
Salaria pavo
Synchiropus phaeton
Deltentosteus quadrimaculatus
Gobius paganellus
Knipowitschia caucasica
Lesueurigobius suerii
Zebrus zebrus
Sphyraena sphyraena
Sphyraena viridensis
Scomber colias
Scomber scombrus
Citharus linguatula
Lepidorhombus boscii
Scophthalmus rhombus
Zeugopterus regius
Arnoglossus imperialis
Arnoglossus laterna
Bothus podas
Buglossidium luteum
Dicologlossa cuneata

Microchirus ocellatus
Microchirus variegatus
Monochirus hispidus
Pegusa lascaris

NT (Near threatened)

Sardina pilchardus
Scardinius erythrophthalmus
Orthrias frenatus
Orthrias panthera
Orthrias tigris
Chlorophthalmus agassizi
Aphanius fasciatus
Zeus faber
Syngnathus acus
Syngnathus phlegon
Syngnathus typhle
Chelidonichthys cuculus
Serranus cabrilla
Serranus hepatus
Serranus scriba
Diplodus vulgaris
Oblada melanura
Sarpa salpa
Spondyliosoma cantharus
Mullus barbatus
Mullus surmuletus
Chromis chromis
Coris julis
Echiichthys vipera
Coryphoblennius galerita
Salaria fluviatilis
Scartella cristata
Gobius cobitis
Pomatoschistus marmoratus
Pomatoschistus minutus
Capros aper
Platichthys luscus
Arnoglossus kessleri
Arnoglossus thori

TM (Threatened migrants)

Isurus oxyrinchus
Cetorhinus maximus
Prionace glauca
Sphyrna tudes
Sphyrna zygaena
Dasyatis centroura
Dasyatis pastinaca
Dasyatis tortonesei
Pteroplatytrygon violacea
Gymnura altavela
Myliobatis aquila
Pteromylaeus bovinus
Rhinoptera marginata
Mobula mobular
Lampris guttatus
Regalecus glesne
Pomatomus saltatrix
Coryphaena hippurus
Luvarus imperialis
Lepidopus caudatus
Trichiurus lepturus
Xiphias gladius
Istiophorus albicans
Tetrapturus belone
Auxis rochei
Euthynnus alletteratus
Katsuwonus pelamis
Orcynopsis unicolor
Sarda sarda
Centrolophus niger
Balistes capriscus
Mola mola
Ranzania laevis

The Red List status of Turkish fish and lamprey species is summarised in Tab. 7. At present, a total of 694 fish and lamprey species is known from Turkey. Out of these species, a total of 397 species is listed on the Red List, with two species globally extinct, 10 species regionally extinct, 65 species critically endangered, 117 species endangered, 136 species vulnerable, 34 species near threatened, and 33 species threatened migrants. An additional 203 species are data deficient. 46 species are not native and were not evaluated for the Red List; they were either introduced or immigrated into the Mediterranean Sea through Suez Canal. This means that only the remaining 48 species of fishes in Turkey are not threatened.

Turkey, as a country planning to join the European Union, will be asked to propose species to be added to the Annexes of the EU Habitats Directive. Considering the diverse fish fauna with a high degree of endemism, a list of species is proposed in Tab. 8; this set of species would be scientifically adequate covering all important

Tab. 8. Fish and lamprey species listed on or proposed for Annexes II, IV and/or V of the EU Habitats Directive.

	EU Habitats Directive	
Species	Listed on Annexes	Proposed for Annexes
**Acanthobrama* spp.		II
Acipenser gueldenstaedtii	V	II
Acipenser nudiventris	V	II
Acipenser persicus	V	
Acipenser ruthenus	V	
Acipenser stellatus	V	II
Acipenser sturio	II, IV prioritary species	
Alburnoides eichwaldii		II
**Alburnus baliki*		II
Alburnus chalcoides	II (as *Chalcalburnus chalcoides*)	
Alburnus hohenackeri		II
**Alburnus kotschyi*		II, IV prioritary species
Alburnus mossulensis		II prioritary species
Alburnus orontis		II, IV prioritary species
**Alburnus tarichi*		II
Alosa spp.	II, V	
**Aphanius anatoliae*		II
**Aphanius asquamatus*		II
**Aphanius danfordii*		II
Aphanius fasciatus	II	
Aphanius mento		II
**Aphanius splendens*		II, IV prioritary species
**Aphanius sureyanus*		II, IV prioritary species
**Aphanius transgrediens*		II, IV prioritary species
**Aphanius villwocki*		II, IV prioritary species
Aspius aspius	II, V (except the Finnish populations)	
Aspius vorax	II, V (as *Aspius aspius*)	
Barbus barbulus	V	II
Barbus barbus	V	
Barbus cyclolepis	II, V (as *Barbus plebejus*)	
**Barbus ercisianus*	II, V (as *Barbus plebejus*)	
**Barbus escherichii*	V	II
Barbus grypus	V	
Barbus kersin	V	
Barbus lacerta	V	
Barbus lorteti	V	II (should be deleted from Annex V)
Barbus mursa	V	
Barbus subquincunciatus	V	
Barbus tauricus	II, V (as *Barbus plebejus*)	
Callionymus fasciatus		II prioritary species
**Capoeta angorae*		II, IV prioritary species
**Capoeta kosswigi*	II, V (as *Barbus plebejus*)	
**Capoeta pestai*		II

Tab. 8 (continued)

	EU Habitats Directive	
Species	Listed on Annexes	Proposed for Annexes
**Carasobarbus chantrei*		II
Carcharodon carcharias		II, IV prioritary species
Cetorhinus maximus		IV
Chondrostoma angorense		II, IV prioritary species
**Chondrostoma beysehirense*		II
**Chondrostoma holmwoodii*		II
**Chondrostoma kinzelbachi*		II, IV prioritary species
Chondrostoma regium		II prioritary species
Chondrostoma vardarense		II
**Clupeonella muhlisi*		II, V
**Cobitis bilseli*		II
Cobitis elazigensis		II
**Cobitis kellei*		II
Cobitis levantina		II
**Cobitis phrygica*		II
**Cobitis puncticulata*		II
**Cobitis simplicispina*		II, IV prioritary species
Cobitis turcica		II
Epinephelus spp.		II, V
Eudontomyzon spp.	II	
**Gobio hettitorum*		II
Gobius vittatus		II
Hemigrammocapoeta spp.		II
Hippocampus spp.		II, IV prioritary species
Huso huso	V	II
**Knipowitschia ephesi*		II prioritary species
Knipowitschia longecaudata		II
**Knipowitschia mermere*		II prioritary species
**Kosswigobarbus kosswigi*	V	II
Labrus mixtus		II
Labrus viridis		II
**Ladigesocypris ghigii*	II prioritary species	
**Ladigesocypris mermere*	II prioritary species (as **Ladigesocypris ghigii*)	
Lampetra fluviatilis	II, V	
**Leucalburnus satunini*		II
Lipophrys nigriceps		II
Liza abu		II
Luciobarbus brachycephalus	V	
Luciobarbus capito	V	
Luciobarbus caspius	V	
Luciobarbus esocinus	V	
Luciobarbus mystaceus	V	
Luciobarbus pectoralis	V	
Luciobarbus xanthopterus	V	II
Misgurnus fossilis	II	

Tab. 8 (continued)

	EU Habitats Directive	
Species	Listed on Annexes	Proposed for Annexes
**Nemacheilus insignis*		II, IV prioritary species
Neogobius gymnotrachelus		II
Neogobius kessleri		II
**Orthrias araxensis*		II
**Orthrias cyri*		II
Petromyzon marinus	II	
Phoxinellus spp.	II	
Psetta maeotica		II, V
Pseudophoxinus spp.		II, IV
Remora australis		IV
Rhodeus amarus	II (as *Rhodeus sericeus amarus*)	
**Salmo platycephalus*		II, IV prioritary species
Salmo salar	II, V	
Sparisoma cretense		II, V
Squalus acanthias		II, V
Squalus blainville		II, V
Thunnus alalunga		II, IV
Thunnus thynnus		II, IV

watersheds, zoogeographical regions and habitats, and would be sufficient for the fulfilment of the Directive, in order to treat Turkey equal to other EU member states.

The conservation of fish fauna and aquatic habitats should receive special attention in Turkey. As the distribution and even the fish species composition of major watershed systems as well as the environmental condition of the fish habitats is still poorly known in many areas, it is strongly recommended to establish a programme for the monitoring and mapping of the fish fauna and environmental quality of aquatic habitats. General recommendations for the management and conservation of marine, transitional and freshwater habitats of Turkey would include the following items:

1) A major environmental problem for fishes and fresh water habitats in Turkey is the extraction of water for agricultural, industrial and domestic purposes, including the construction of numerous weirs and barrages. In many parts of the country, this often leads to complete drying up of streams and rivers. Permanent water, however, is essential to maintain fish populations. Additional threats include the discharge of untreated sewage which pollutes aquatic habitats, and toxic substances including pesticides and herbicides which are used close to aquatic habitats, or which are discarded into streams and rivers. It is therefore suggested that Turkey should establish a general Water Management Plan that takes into account both human and environmental needs. The Turkish Ministry of the Environment should be involved in any construction or development plans to make environmental assessments, and should have the right to veto on developments that would further threaten the fish fauna and aquatic habitats. Plans should also be developed to improve the present situa-

tion. In general each major river system should have at least one major stretch of stream and river from the source to the estuary free of barriers and other environmental threats. In case that the river runs through neighbouring countries, the situation should be negotiated with these countries.

2) It is proposed to establish a set of conservation areas for fish and aquatic habitats in all major river systems and zoogeographical regions in Turkey. Sites should be established at least for the species listed on Annexes II and IV of the EU Habitats Directive, and for the species proposed in the present paper (Tab. 8). For areas where migratory species occur but do not permanently live, sites as stepping stones (resting areas for adult upstream and juvenile downstream migration) according to the present usage in the EU member states should be established.

3) In order to assist successful conservation programmes for fishes and their habitats in Turkey, environmental education of the public (regarding water cycle, saving water, importance of healthy aquatic environments, threats and conservation) should be intensified.

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